1981-82 Annual Report

Alberta
AGRICULTURE

ALBERTA AGRICULTURE'S
ANNUAL REPORT
1981 - 82

TO THE HONOURABLE FRANK LYNCH-STAUNTON
Lieutenant-Governor of the Province of Alberta

Sir:

I have the honor to submit the annual report of Alberta Agriculture for the fiscal year ended March 31, 1982.

I have the honor to be, Sir,

Your Obedient Servant
DALLAS W. SCHMIDT
Minister of Agriculture

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HONOURABLE DALLAS SCHMIDT
Minister of Agriculture

Sir:

I have the honor to submit the annual report of Alberta Agriculture for the fiscal year ended March 31, 1982.

Respectfully submitted,

H.B. McEwen
Deputy Minister

DR. J.G. O'DONOGHUE, 1919-1981

Alberta's agricultural community suffered a substantial loss on July 4, 1981 in the sudden death of Dr. James G. O'Donoghue, Deputy Minister of Agriculture.

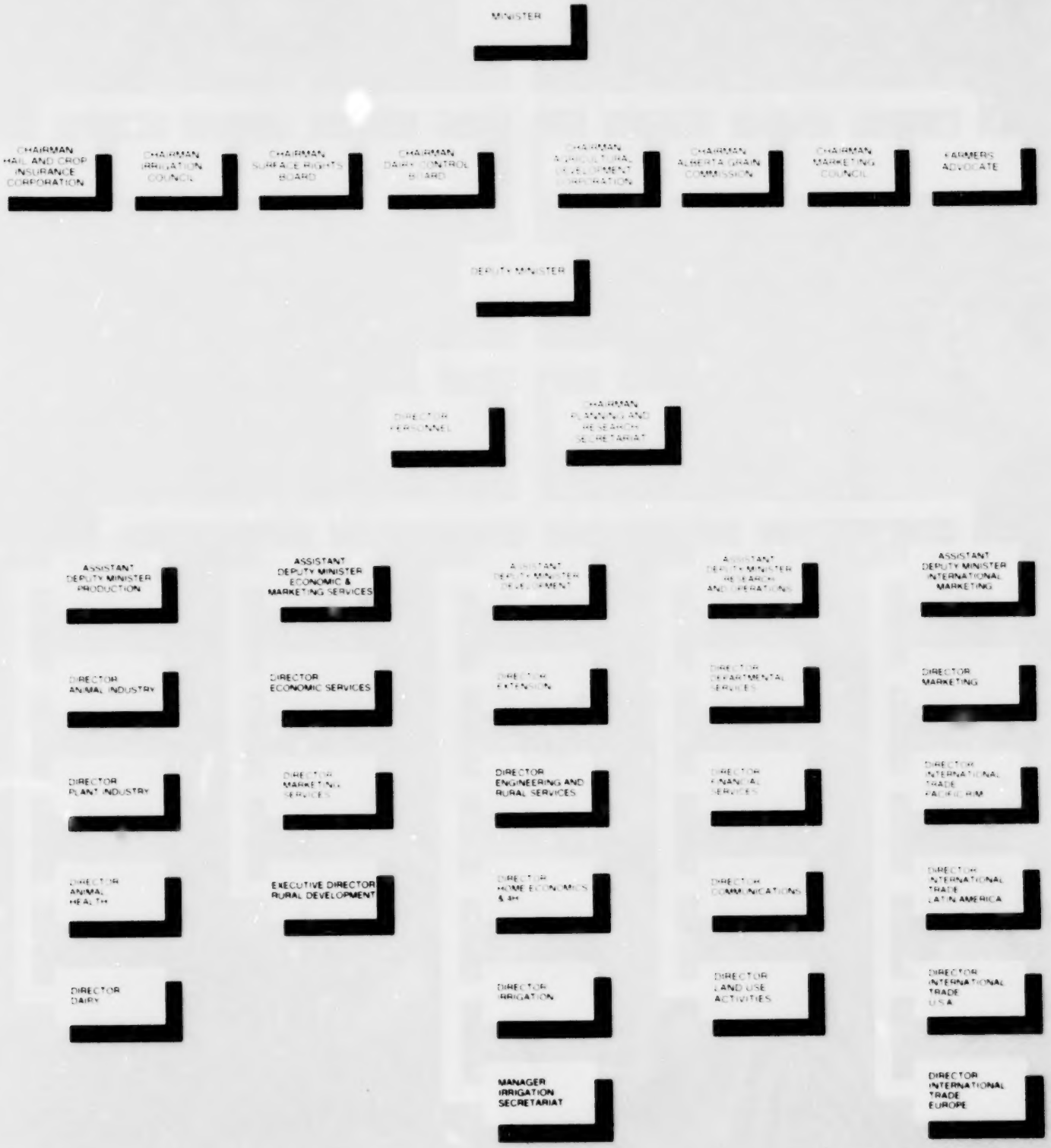
As deputy minister, Dr. O'Donoghue exercised considerable influence on the province's agricultural industry. His personal research interests were linked to his background in veterinary medicine. In the 1940s and 1950s he helped to promote the wide-scale introduction of animal health programs on Alberta farms. He was instrumental in pioneering remedies for vitamin A deficiency in cattle, and was concerned about the effects of various industrial chemicals on animal health.

During his career, Dr. O'Donoghue regarded extension as a valuable tool in promoting the wider use of research findings. He appreciated that the continuing implementation of new technology was vital to the progress of Alberta's agriculture.

Shortly before he died the first cooperative agricultural research agreement between Alberta and the State of Alaska was signed. It was subsequently named the Dr. James G. O'Donoghue Agreement.

Dr. O'Donoghue will long be remembered for his contribution to agriculture in Alberta generally, as well as for his interest in agricultural research.

ORGANIZATIONAL CHART



MARCH 31, 1982

HIGHLIGHTS OF THE 1981-82 ANNUAL REPORT

- During 1981-82 Alberta Agriculture implemented a number of new programs as part its ongoing commitment to improve services to Alberta's agricultural industry and rural community. These programs included transportation assistance for liming acidic or acid-prone soils, an insurance program to cover hay and pasture losses in certain portions of the province, a program to compensate honey producers struck by marauding bears and a reorganization of Agriculture Week to attract more public participation.

- Excluding special warrants and grants to Crown corporations, in 1981-82 growth in departmental spending was held to 8.5% of the previous year's spending. During the year 24 new positions were added for a total permanent staff of 1404.

- Phase 2 of the nutritive processing agreement was signed with the federal government. During 1981-82 grants exceeding $4.3 million were made under this joint federal-provincial program to improve nutritive processing capabilities in rural areas of the province.

- A number of special programs arose out of climatic setbacks or national economic difficulties. These included:
  - The $133 million Alberta beef cattle and sheep support program which provided increased cash flow to 57,933 Alberta livestock producers. Under a separate segment of this program a grant of $800,000 was made to the Alberta Cattle Commission to improve beef marketing at the consumer level.
  - The Alberta feed freight assistance program which provided approximately $2.8 million in aid to producers in areas where weather had a severe impact on hay yields and pasture quality.
  - An extension of the Alberta emergency stop loss program for hogs. Additional payouts worth $5 million were required before rising market prices eliminated the need for the program.
  - A one-time grant of $10 million made to the Alberta Pork Producers Marketing Board to enable it to develop and undertake a voluntary assured returns program for Alberta hog producers.
  - Additional funding required by the Alberta Agricultural Development Corporation to handle increased loan demands from Alberta farmers and to continue funding the corporation's beginning farmers program.

- Payment for crop losses under the basic policy of the Alberta Hail and Crop Insurance Corporation were lower than normal.

- A number of ongoing programs were particularly active during 1981-82. Among them:
  - The Alberta agricultural societies capital grant program processed grants to 26 agricultural societies for new or improved facilties in various parts of rural Alberta.
  - The 1981 dugout pumping program provided equipment and assistance to more than 800 farmers.
  - Agricultural manpower programs assisted 1030 students with temporary summer employment.

- Various services offered by Alberta Agriculture were in heavy demand.

  - Alberta Agriculture's food processing laboratory handled 46,533 samples of food, food ingredients and other agricultural commodities involving 164,015 separate tests. More than 936,000 milk samples were analyzed for payment purposes.
  - Municipal cooperative seed cleaning plants handled 28.8 million bushels of grain in 1981-82.
  - The Alberta Tree Nursery and Horticulture Centre distributed 2.3 million shelterbelt trees and shrubs during April and May 1981.
  - The Alberta Agriculture soil and feed testing laboratory processed 17,990 soil samples submitted by producers.
  - District extension personnel handled more than 440,000 individual contacts during the year.

- A number of programs were administered by the department on behalf of the Alberta Heritage Savings Trust Fund. These included:
  - — Farming for the Future distributed more than $4 million to 105 agricultural research projects in operation during 1981-82. Two other programs implemented during the year increased producer participation in the development and testing of agricultural technology and assisted graduate agricultural students in undertaking research projects.
  - — The irrigation rehabilitation program supported cost-sharing projects between the province and Alberta's 14 irrigation districts. The 66 projects started or continuing in 1981-82 had a total construction value of $37 million.
  - — Planning proceeded for the new $7 million provincial food processing development centre. The centre will assist Alberta food processors in developing new food processing technology, and in testing pilot plant production of new products. The centre is expected to be in operation by late 1983.

TABLE OF CONTENTS

Planning and research secretariat 1
Personnel administration division 2
Farmers' Advocate of Alberta 4
Agricultural Development Corporation 4
Surface Rights Board 5

RESEARCH AND ADMINISTRATION

Farming for the Future 9
Communications division 10
- Print media branch 10
- Broadcast media branch 10
- Educational programs branch 10

Financial services division 11
Departmental services division 14
- Library services 14
- Computer services branch 14
- Records management 14

Land use activities division 15

DEVELOPMENT

Extension division 19
- Training and development branch 20
- Region 1 22
- Region 2 23
- Region 3 23
- Region 4 24
- Region 5 24
- Region 6 25

Home economics and 4-H division 29
- Home economics branch 29
- Region 1 29
- Region 2 30
- Region 3 30
- Region 4 31
- Region 5 31
- Region 6 32
- 4-H branch 34

Engineering and rural services division 36
- Rural services sector 36
  - Agricultural services branch 36
  - Community services branch 36
- Engineering and home design sector 37
  - Engineering field services branch 37
  - Engineering resource branch 37
  - Home and community design branch 38

Irrigation division 39
- Farm irrigation services branch 39
- Land classification branch 40
- Drainage branch 41
- Project planning branch 41

Irrigation secretariat 42

ECONOMIC AND MARKETING SERVICES
Canada-Alberta Subsidiary Agreement on Nutritive Processing Assistance 45
Marketing services division 46
Food laboratory services branch 46
Food marketing branch 49
Agricultural processing development branch 50
Commodity development branch 50
Business analysis branch 51
Nutrition at school 52
Economic services division 54
Market analysis branch 54
Statistics branch 54
Production economics branch 55
Resource economics branch 55
Farm business management branch 56
Regional economic and business services branch 57
Agricultural Products Marketing Council 57
Alberta Grain Commission 58
INTERNATIONAL MARKETING 63

PRODUCTION
Animal industry division 69
Beef cattle and sheep branch 69
Horse industry branch 78
Pork industry branch 79
Poultry branch 83
Regulatory services and feeder associations branch 85
Dairy division 87
Dairy processing branch 87
Dairy farm inspection branch 87
Dairy cattle improvement branch 88
Administration and statistics branch 88
Alberta Dairy Control Board 89
Plant industry division 89
Field crops branch 89
Alberta tree nursery and horticulture centre 90
Alberta horticultural research center 92
Soils branch 93
Crop protection and pest control branch 95
Weed control and field services branch 96
Weather modification 96
Alberta Hail and Crop Insurance Corporation 97
Animal health division 98
Meat hygiene branch 98
Preventive medicine branch 99
Pathology branch 99
Regional laboratories branch 100
Reference laboratories branch 100

APPENDIX
Acts administered by Alberta Agriculture 103

Alberta
AGRICULTURE

1981-82 Annual Report

PLANNING AND RESEARCH SECRETARIAT

Emphasis in the work of the secretariat shifted during 1981-82. Planning and research on agricultural issues took on a greater role, liaison remained important, while evaluation of policies became a more important function.

The secretariat's first priority continued to be support to the offices of the Minister and Deputy Minister of Agriculture in reviewing reports and developing alternative positions on current issues.

Responsibilities for land use activity were transferred to the new land use activities division as of March 17, 1982.

Alberta Agricultural Coordinating Committee functions remained a continuing activity of the secretariat, as well as interdepartmental committee assignments.

Activities Completed During 1981-82

Evaluations:	4-H Phase 2
	Agricultural Fieldman Turnover
	Agriculture Week Activities
Briefing Books:	Alberta Agriculture Spring Conference 1981
	Grain Summit, Regina, February 1982
	31st Annual Federal-Provincial Conference of Ministers and Deputy Ministers of Agriculture (also the planning, organization, coordination and implementation of same)
Reports:	Agri-Food Strategy Response
	Horner Meat Study Input
	Beef and Sheep Ministerial Committee Input
	Evaluation Procedures and Techniques
	Crow and Grain Marketing Issues
	Reviews of Other Reports
	Marketing Boards Legislation and Regulations Review
	Credit for Livestock Producers
Papers Presented:	Agricultural Economics Meeting
	Rural Sociological Society
	Rural Health Care

PERSONNEL ADMINISTRATION DIVISION

The personnel administration division developed and administered personnel policies for the department in the areas of staff development, occupational health and safety, and personnel services. These programs were provided as support to aid line management in the achievement of departmental aims and objectives.

Staff development provided management advisory services and human resource development coordination to ensure that job-related learning experiences were available for all staff. Providing advice in the management process and organizational development was also a major responsibility.

The branch processed 912 applications for training courses of which 441 were in-service, 283 out-service and 188 in-house. In addition, there were six applications for educational leave. Three performance appraisal courses were conducted resulting in the training of 40 employees. Two organizational reviews were conducted in conjunction with outside consultants, the first in home economics and 4-H and the other in brand inspection. The recommendations of both reports were being reviewed by the department.

Occupational health and safety provided appropriate programs to meet the requirements of The Occupational Health and Safety Act and to assist managers in ensuring that employees had a healthy and safe workplace.

A review was started of joint worksite committees to examine their role within the department. This was part of a service-wide review initiated by the Public Service Commission's occupational health and safety unit. Ninety-one occupational health investigations were carried out at Lethbridge, Airdrie and Edmonton. Numerous safety concerns were investigated and resolved during the year. Defensive driving, first aid and general safety seminars were presented for department staff.

Personnel services provided recruitment and selection, position classification and employee relations services for the department.

The decentralization of classification authority from the Public Service Commissioner's office to the department continued throughout the year. The goal for total decentralization of all classes in the opted-out, excluded and bargaining unit categories is May, 1983.

The university recruitment program resulted in 10 district agriculturists and six district home economists accepting job offers.

Personnel Services: Transactions for the Period 1 April 1981 to 31 March 1982

Number of competitions	192
Commencements	188
Terminations	198
Transfers	93
Reclassification — change	141
— no change	8
Classification appeals — upheld	0
— denied	4
— pending	4
Updates	190
Position creations — permanent	24
— temporary	36

The management sublevel committee processed 54 requests for review, with the result that 29 were granted and 25 were turned down. The committee had seven requests pending.

Three formal grievances were lodged with the department during the year. One concerned the dismissal of an employee and was granted at step three of the grievance procedure resulting in the employee's reinstatement.

Two employees were dismissed owing to unsatisfactory performance during the year. Other grievances concerned parking and unfair treatment. These were resolved at steps one and two of the grievance procedure.

ALBERTA AGRICULTURE PERMANENT POSITIONS AS OF MARCH 31, 1981

Divisions	Clerical	Professionals	Technical	Others*	Total	%
General Administration	6	6	—	1	13	0.9
Research and Operations	62	32	4	3	101	7.2
Personnel Administration	10	8	—	—	18	1.3
Planning and Research Secretariat	2	8	—	—	10	0.7
Farmers' Advocate	2	3	—	—	5	0.4
Surface Rights	12	16	—	—	28	2.0
Irrigation Division and Secretariat	16	36	75	3	130	9.3
Dairy Division	10	39	—	2	51	3.6
Animal Industry	29	90	9	1	129	9.2
Animal Health	20	75	34	1	130	9.2
Dairy Control	8	6	—	—	14	1.0
Plant Industry	31	87	61	7	186	13.2
International Marketing	5	14	—	—	19	1.4
Marketing Services	17	52	12	—	81	5.8
Economic Services	21	51	5	—	77	5.5
Engineering and Rural Services	8	31	6	2	47	3.3
Extension	129	122	1	5	257	18.3
4-H & Home Economics	9	97	—	2	108	7.7
Department Totals	397	773	207	27	1404	
Percentages	28.3	55.1	14.7	1.9		100.0

* OTHERS: Duplicating equipment operators, audio-visual aid technicians, bindery equipment operators, stockkeepers, automotive equipment operators, mobile drill operators, on-line data processing operators, automobile mechanics, motion picture photographers, artists, and maintenance service workers.

FARMERS' ADVOCATE OF ALBERTA*

The office of the Farmers' Advocate of Alberta continued to meet the requests made of it by the farming community. These requests have been many and varied; however, the general area of concern has been land use and, more specifically, agriculture's interaction with the oil industry.

AGRICULTURAL DEVELOPMENT CORPORATION**

The Agricultural Development Corporation (ADC) was established by The Agricultural Development Act (1972) to provide financial assistance to farmers and agricultural processors in the province. ADC provides assistance to agricultural enterprises through direct loan financing on a long term basis and an extensive loan guarantee program through other lenders to cover short and intermediate term financing.

Accumulated direct farm loans and guaranteed farm loans (including Alberta Farm Development Loans) authorized during the ten years from June 1972 to March 1982 amounted to $1,331,000,000 for 86,275 loans. Of this number, 23,062 loans totalling $657,400,000 were active and outstanding on 31 March 1982. In addition, during the ten-year span, ADC authorized 469 agribusiness direct loans and specific guaranteed loans for a total of $135,800,000. As of 31 March 1982, 128 of these loans were active and outstanding for a total of $39,800,000. Between June 1972 and March 1982 ADC's total authorizations included 86,744 loans amounting to $1,466,800,000. The total portfolio active and outstanding at 31 March 1982 amounted to 23,190 loans representing $697,200,000 (these figures include 870 Farm Purchase Board loans, with $4,800,000 still outstanding at 31 March 1982), approved prior to June 1972.

In 1981-82, direct farm lending rose by 25 per cent to $224,900,000 compared with $179,400,000 in 1980-81. Of these funds, $193,500,000 was loaned under the beginning farmer program which expanded by 33 per cent from $145,300,000 in 1980-81. Part A and Part B direct loans decreased slightly in numbers; however, the dollar value of Part A and Part B loans remained relatively stable at $31,400,000 compared to $34,100,000 in 1980-81. The 1290 loans made to beginning farmers, and the 260 other direct farm loans made in 1981-82 averaged $145,000. In 1981-82, $63,700,000 was made available by other lenders under ADC's Alberta Farm Development Loan (AFDL) guarantees and $1,800,000 was disbursed as specific guarantees. These guarantee programs gave financial assistance to over 4500 primary producers.

ADC provided $14,000,000 incentives to encourage the development of Alberta's agricultural industry by way of interest reduction to beginning farmers and special incentives to specific sections of primary agriculture. In addition to monetary incentives to individual producers, ADC field staff provided consulting services to farmers through over 28,000 field office interviews and 3200 farm visits.

During the year, ADC authorized 57 direct or specific guranteed loans to agribusinesses, including 20 direct term loans to rural gas distribution cooperatives, for a total of $25,800,000.

The corporation also provided relief to the alfalfa processing industry by making available direct term loans to finance or refinance term debt. This program was initiated to offset depressed market conditions and provide a buffer against current high interest rates.

The Agricultural Development Corporation continued to monitor and revise its lending policies and programs to assist in the development of Alberta's agricultural industry.

* A more detailed and comprehensive annual report issued by the Farmers' Advocate's Office is available through the Minister of Agriculture or directly from the Farmers' Advocate.

** The Agricultural Development Corporation publishes an annual reports which provides detailed program descriptions, statistical data and comprehensive analysis of the corporation's activities.

SURFACE RIGHTS BOARD*

Under The Surface Rights Act, the board granted operators the right to use the surface of land for mineral development and for the construction of pipelines, power transmission lines and telephone lines, and determined the amount of compensation payable by the operators.

The board held hearings and made decisions with respect to (1) damage disputes and (2) requests for review of annual compensation under board compensation orders and surface leases. It continued to assist in the recovery of money under board orders and surface leases.

The Expropriation Act was administered by the board with respect to expropriations of land authorized under or pursuant to section 29 of The Water Resources Act and The Hydro and Electric Energy Act.

* The board presents a detailed annual report to the Minister of Agriculture each year.

RESEARCH AND ADMINISTRATION

Alberta
AGRICULTURE

RESEARCH AND ADMINISTRATION

RESEARCH AND ADMINISTRATION

The research and administration sector was responsible for the central administrative functions of Alberta Agriculture as well as overall coordination of research activities undertaken by the department.

In 1981 the sector added a fourth division, land use activities, to supervise and promote better land use in Alberta, particularly non-agricultural development of high quality farmland and development of Crown land for agricultural purposes.

The sector's research role continued to expand. A department policy paper on agricultural research was developed by the sector and approved by the Minister during the year. A background paper on the supply of scientific manpower for agricultural research was also developed.

The sector continued its research and science-related liaison activities with other government, university and private agencies. It was also involved in the forward planning and coordination of proposed research-oriented capital facilities for the department and continued to operate an inventory of agricultural research activities undertaken in the province.

Internal audit, a management support function which assesses operational and control aspects of the department, completed its first year. Reviews of financial services, personnel, the Alberta Tree Nursery, marketing services and the Nutritive Processing Agreement were undertaken.

FARMING FOR THE FUTURE*

The Farming for the Future agricultural research program, supported by the Alberta Heritage Savings Trust Fund, completed the third year of its five-year mandate in 1981-82.

At a policy conference in January 1982, the Agricultural Research Council of Alberta, which administers the program, reviewed its activities and recommended renewal of the program to 1988-89.

In 1981-82, Farming for the Future supported 105 projects, including 25 new research proposals. Expenditure for the year was estimated at $4.0 million, bringing the total program expenditure in three years to $9.4 million.

In February 1982, the Agricultural Research Council approved support for 141 projects, 40 new proposals and 101 renewals, for an anticipated cost of $5.7 million during 1982-83. The council also announced two new Farming for the Future subprograms, the on-farm demonstration program and the graduate student research support program. The programs are intended to encourage more efficient transfer of new technology to producers and to improve the future supply of scientific manpower for agricultural research.

* A more detailed and comprehensive annual progress report of Farming for the Future activities is provided to the Legislature each year through the Minister of Agriculture.

COMMUNICATIONS DIVISION

The communications division provided information, publicity and media backup service for Alberta Agriculture programs and policies. Support for research, production and marketing was emphasized. Publicity and organizational support for special events was extended to producer groups and agricultural organizations. The division played a major role in Agriculture Week and the Alberta Agriculture Hall of Fame. Production of federal-provincial media projects was maintained through participation in the Canadian Committee on Agricultural Communications.

Print Media Branch

The branch provided editorial, publishing and distribution services to meet the expressed needs of the department and its related boards and agencies.

In addition to major releases, a weekly news release package, *Agri-News*, provided 512 articles to 196 media facilities and 3,750 other recipients. A listing of new and revised publications was distributed monthly to individuals and organizations in the agriculture industry. Twenty-three different newsletters and reports were printed and distributed to the public regularly. Requests for information from farmers, students, corporations and other governments were processed as a public service.

Nine hundred different publications on agriculture, home economics, and home gardening were available to the public from the branch and district offices. One hundred and seventeen new and revised publications were written, designed, edited and printed for general distribution.

There were 300 printing jobs placed with commercial printers and 2,970 duplicating jobs were handled by the duplicating shop.

Timely recommendations on production techniques were sent monthly to more than 48,000 commercial farmers by means of an insert to the Alberta edition of the *Country Guide* magazine.

Staff graphic artists were responsible for approximately 215 design jobs for the department's printed and audio-visual materials.

Broadcast Media Branch

"Call of the Land" was broadcast on 21 stations each weekday in Alberta. The two farm commentators also participated in open-line radio programs for home study courses.

Three 30-minute feature television programs were aired on prime time. The programs consisted of a special on Alberta's trade with Japan and Korea; a look at Alberta's water resources; and an Agriculture Week feature on technology. Extension films on manure disposal and farm structures as well as vignettes on Hall of Fame inductees were produced internally. Films on landscape architecture, pesticide safety and basic horse training were contracted to local production houses. Two public service announcements and nine new clips were produced and distributed to Alberta television stations.

Additional services provided by the branch included film and slide library and tool crib, audio visual production, television and radio workshops, and home study radio and television programs.

Educational Programs Branch

The primary purpose of the Alberta Agriculture home study program was to disseminate comprehensive educational material to the agricultural industry in general, and the farm operator in particular.

Four courses were developed: Alberta irrigation management course, Alberta farm buildings course, Alberta forage course and the Alberta animal health course. After a multi-media advertising campaign conducted in the fall, courses were delivered in all agricultural regions except region 4. Total enrolment last year was 4,000 students. Accompanying course delivery were regional and district seminars, open-line radio programs, trade fairs and other types of information meetings.

This branch developed and coordinated Agriculture Week and the Hall of Fame banquet. The province's participation in World Food Day was also organized.

Agriculture Week was held at the University of Alberta in February in order to allow visiting high school students to look at agriculture as a career choice. Newspapers were provided with material to be used for the development of agriculture supplements and radio stations were provided with a commercial package.

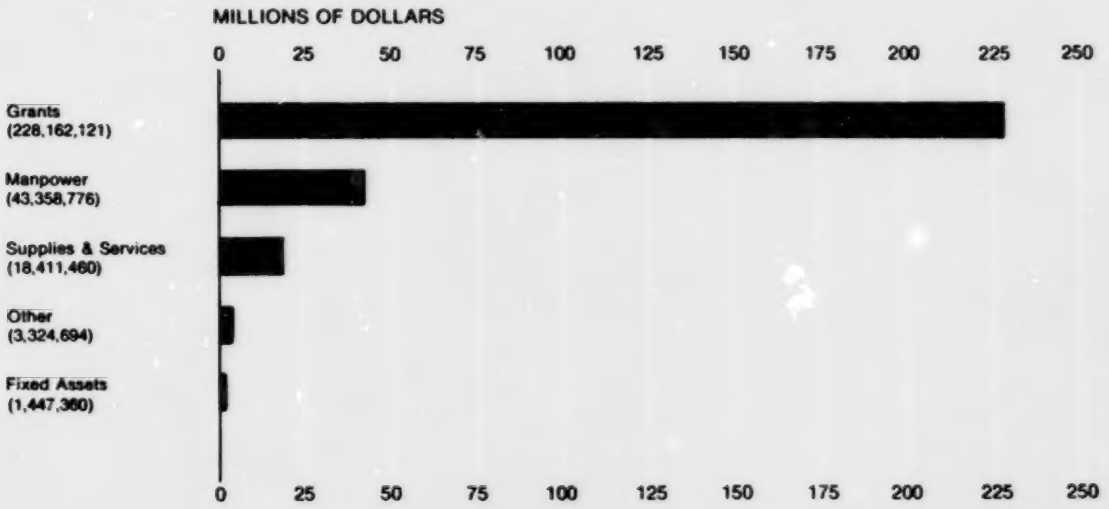
A one-day educational tour was organized for the urban news media.

FINANCIAL SERVICES DIVISION

The financial services division was responsible for:

- the processing for payment of all expenditures incurred by the department
- the collecting and depositing of all departmental revenue
- the budgeting and other financial matters relating to the department
- the operations of the departmental mailroom, including all incoming and outgoing mail
- the purchasing of all materials, supplies, and equipment for the department
- the processing of the department's payroll
- the inventory control of the department.

TABLE OF EXPENDITURE CONTROL SERVICES 1981/82 (UNAUDITED)



DEPARTMENT OF AGRICULTURE EXPENDITURES 1972-82

(Millions of Dollars)

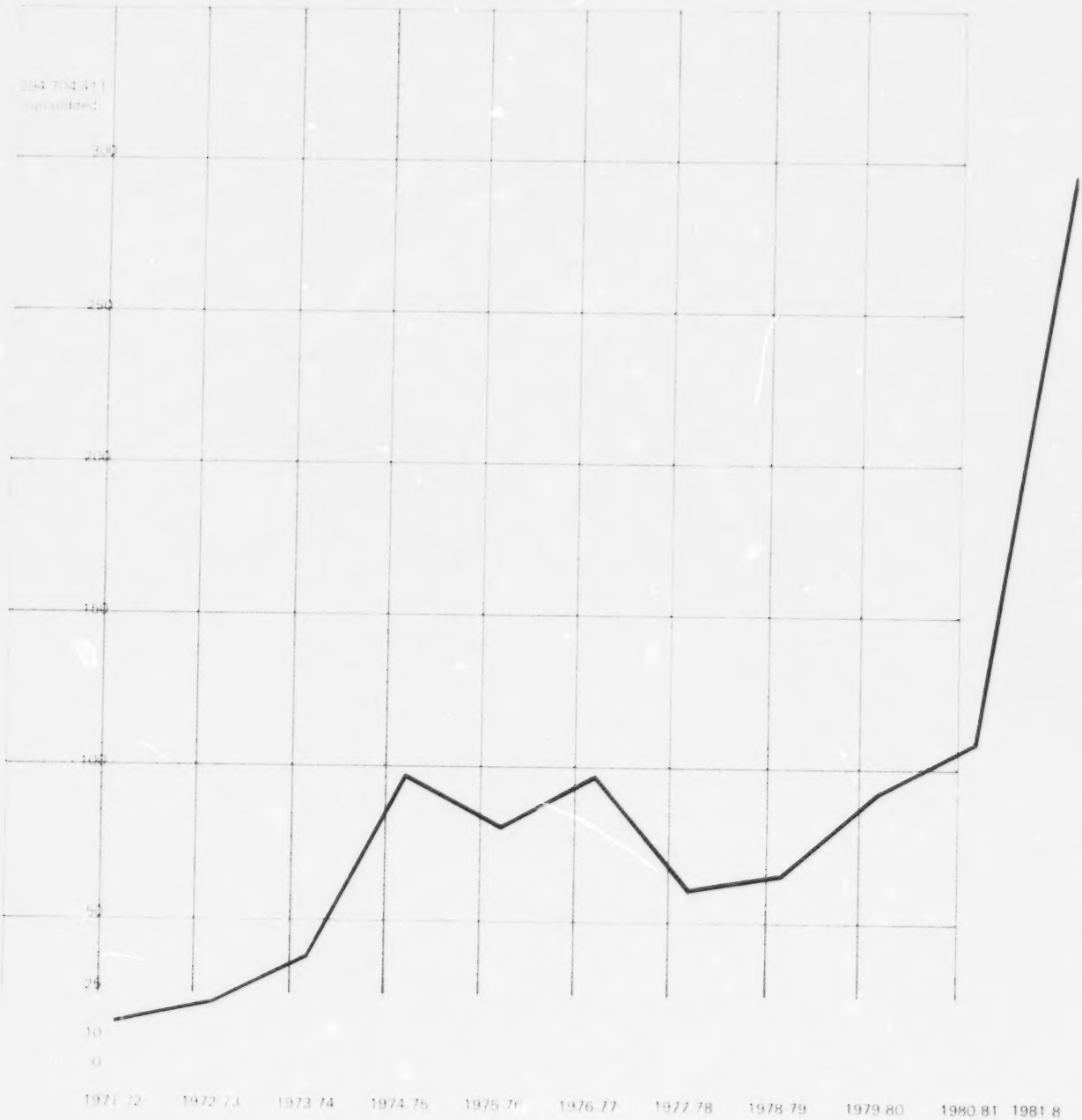
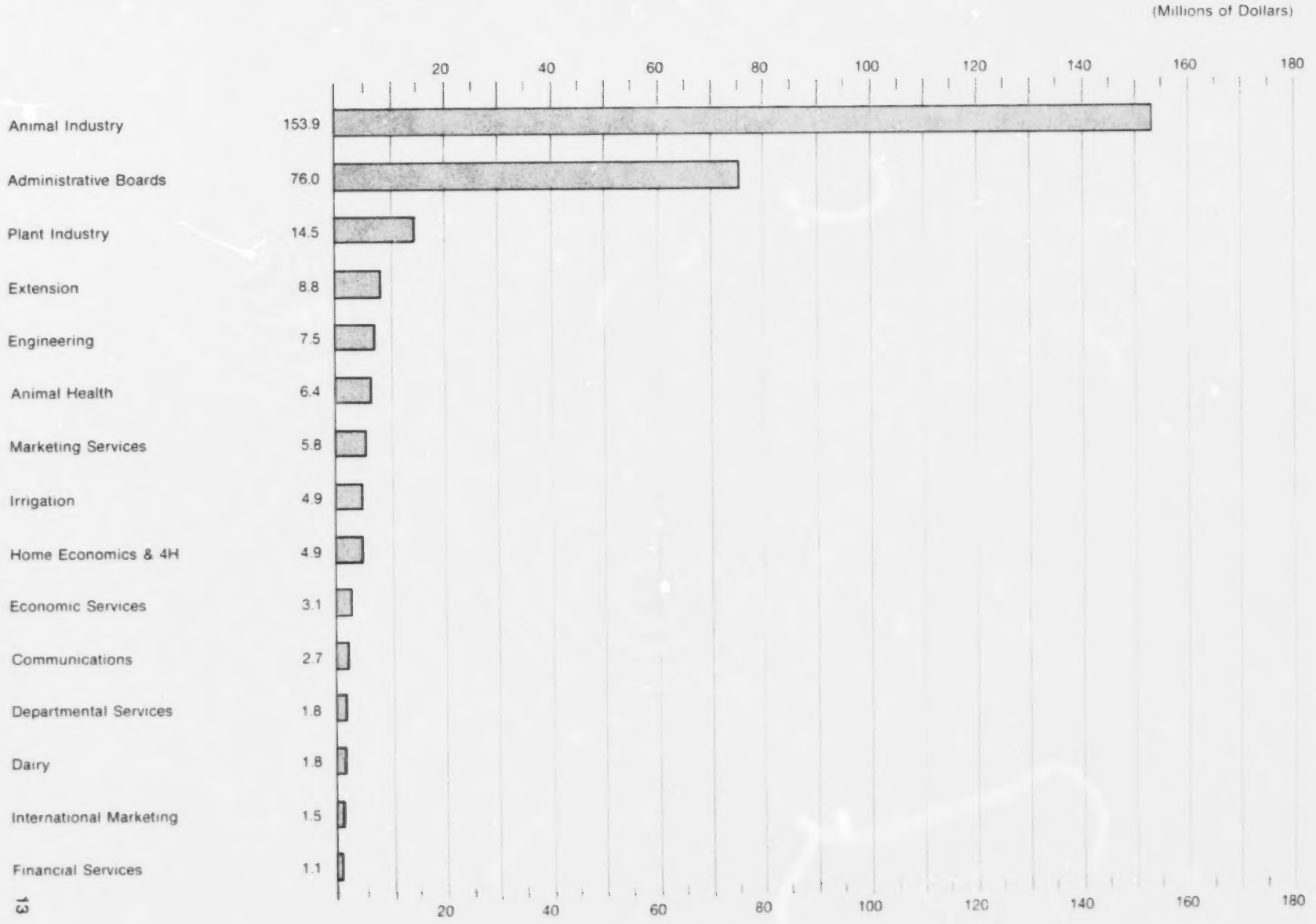


TABLE OF EXPENDITURES 1981-82 (UNAUDITED)



DEPARTMENTAL SERVICES DIVISION

Library Services

The departmental library was responsible for the overall planning and operation of library services in the department. Specific services included collection development, central ordering of all books and subscriptions, interlibrary loans and information services. The library was also open to members of the public requiring specialized agricultural information.

Reference work continued to be a high priority. Interlibrary loan requests continued at a high rate. One thousand thirty-four articles books were received from the University of Alberta through the Alberta Provincial Government Libraries' Interlibrary Loan Service. An additional 760 interlibrary loans were requested from institutions outside the province. The library lent nearly 1000 items books to the public and to other institutions in 1981-82.

SCITECH, the cooperative automated cataloging system of the Agriculture, Environment and Alberta Research Council libraries became partially operational in 1981-82. Using the University of Toronto Library Automation Systems (UTLAS), Agriculture created a file of 3500 records including all new acquisitions since January 1981 and the book holdings of the branch libraries (excluding the two large branches at Brooks and O.S. Longman building.)

Library orientations were held regularly for new department staff. Inservice training for part-time of branch library staff from Airdrie regional office, Vermilion regional office and the dairy division, Wetaskiwin, was held in November.

Library Recent Additions continued to be distributed monthly to a mailing list of 800 staff and 35 external offices.

Alberta Agriculture Libraries' Periodicals List of approximately 850 titles held in the main library and the branch libraries was distributed on request.

A Guide to Agricultural Periodicals Published in Western Canada 1981 was printed in which 154 periodicals were listed.

The library participated in Agriculture Week by organizing a display entitled "Bridging the Information Gap." Staff of the University of Alberta Science Library, Rutherford Library and Rural Economy Library assisted with the project featuring the on-line bibliographic data base AGRICOLA.

Computer Services Branch

The computer services branch continued to provide for the maintenance and optimal use of computerized systems within the department.

On-going systems included dairy herd improvement, dairy farm inspection, fixed assets inventory, cattle brand retrieval, shelterbelt distribution, veterinary information retrieval, soil and feed testing analysis, vehicle expense system, beef record of performance, farm business analysis, departmental mailing labels, departmental telephone directory and apiculture registry.

The operation of the above systems was enhanced by installing a new distributed data entry system.

The branch provided the computerization for the 1981 beef cattle and sheep support program.

Development continued on the budget information system, a soils information system and the weed alert information system.

The branch continued to provide service to the department staff in the areas of statistical analysis, mapping graphics, procurement of hardware and software and the administration of the electronic data processing (EDP) central fund.

The branch participated in various special departmental projects which included:

— the communications systems task force

— the Alberta Agriculture programmed access to communications (AAPAC)

— the installation of two shared logic word processing systems

— the microcomputer training and evaluation project.

Records Management

During the fiscal year work continued on the department records management program, providing a review of various records held in the department. Procedures and requirements have been complied with involving the public records committee which approved the records disposition schedules; the Provincial Archives of Alberta in the preservation of historical/

archival records; and the transfer, storage, and/or destruction of records at the Alberta records centre.

Most of the work involving inactive records was completed and a new phrase of assisting in the control of current records will be implemented.

LAND USE ACTIVITIES DIVISION

The division was created in January, 1981. Three staff members were recruited and in place by May, consisting of a director, an energy relations coordinator and a secretary.

The division was transferred from the production sector to the research and administration sector in April 1981.

Reviews of the agricultural content of the draft regional plans for Peace River and Battle River Regional Planning Commission areas were completed.

Consultation with several local governments during the preparation of their land use by-laws and general plans were made either directly or through the offices of the district agriculturist. A summary of the agricultural content of all the rural land use by-laws in the province was initiated.

A joint effort with the soils branch and Canada Soil Survey to develop a computerized index of soil type and productivity, on a quarter section basis, was well underway with a completion date set of April 1984.

A preliminary evaluation of the extent of land with potential for agricultural development within the green zone was made. This information, along with data on undeveloped lands within the white and yellow zones to be gathered next year, will improve our understanding of the extent of Alberta's agricultural land base.

The department was represented at two petrochemical plant Energy Resources Conservation Board (ERCB) hearings in the Prentice-Joffre area in the past year and made a written presentation to the heavy oil hearings conducted in Lloydminster. The division participated fully on the ERCB's advisory committee on agricultural matters.

Land use activities personnel actively participated in the integrated management planning process to ensure agricultural interests received fair presentation. Three district agriculturists were appointed as members of planning teams during the past year.

Staff members provided major input into the Environment Council of Alberta interdepartmental committee reviewing the material for the hearings on the maintenance and expansion of Alberta's agricultural land base.

In October 1981 the division became a referral agency for sanitary landfill site applications to the Alberta Board of Health to ensure agricultural capability of the land is considered.

The land use activities division continued to provide the major focus and support for the department's land use committee. The major task of the year was the drafting and adoption of a set of policy guidelines for agricultural land use to assist staff in dealing with agricultural land use issues.

Meetings and discussions with agricultural development committees, farm organizations, planning groups, and district and regional staff were conducted the year round throughout the province, to promote better agricultural land use and the planning thereof.

The following table summarizes the number of referrals by type handled by the division during the past year.

REFERRALS*

(April 1, 1981 – March 31, 1982)

Pipelines	18
Transmission lines	31
Coal mines	8
Plants (gas processing, fertilizer, etc.)	7
Sand, gravel pits (limestone quarries)	7
Highways & secondary roads	2
Annexations (cities, towns, villages)	56

*Note – Subdivision application referrals to district staff are not included.

DEVELOPMENT

Alberta
AGRICULTURE

DEVELOPMENT

EXTENSION DIVISION

The extension division actively pursued its role as the department's primary contact with producers. These contacts were provided throughout the province through the department's 66 district offices in six regions. The demand by producers, producer groups and agribusinesses for educational programs, department programs and services continued to be high. Office interviews, telephone inquiries and farm visits were approximately the same as for 1980-81. There were in addition a great many requests for information on the Alberta beef cattle and sheep support program. The number of educational programs and attendance at these programs was approximately at the same level as in 1980-81.

District agriculturists responded to a wide range of inquiries from farmers for technical, production, management and social relations information. Although the requests varied somewhat between regions, production and technical subjects were most in demand overall, followed by farm management and economics.

Shifts in the relative prices, costs and profitability of major commodities, marketing restraints, land use decisions, surface rights and similar topics were reflected in district agriculturists' programs and the services offered.

The division continued to conduct educational programs. Winter courses and programs offered included farm business management, alternative cropping opportunities, marketing techniques, rights of farmers, livestock production and opportunities, management of resources, commercial crops, community work, labor relations and farm law.

District agriculturists also promoted and participated in the department's home study courses, conducted home study sessions in the districts, and assisted in seminars and conferences held at central locations in the regions.

District offices processed approximately 59,000 applications received from 36,000 applicants regarding the Alberta beef cattle and sheep support program.

The division co-sponsored a "Managing Agricultural Technology for Profit" conference with the economic services division and the home economics and 4-H division.

During the year, 92 individual names of homes were registered under The Names of Homes Act which is administered by the extension division.

University recruitment provided eight graduates for placement in offices as district agriculturists-in-training. Additionally, through open competition, five qualified agrologists were hired as district agriculturists.

Preliminary visits were made to the three western universities for public relations and career counselling purposes.

The division's in-service training program continued. All new recruits to the extension division received a one-day orientation to acquaint them with the department and their job role. Following this, staff members were required to attend a communications workshop conducted each year by the extension division and the home economics and 4-H division. A training workshop was held for trainers. In addition, the development of a *Trainer's Manual* and a companion *Trainee's Manual* began. The two manuals were the result of a cooperative effort between staff in the extension and home economics and 4-H divisions.

The final in-service program for extension staff having over one and one-half years' experience was the annual program planning and evaluation workshop, also a cooperative effort.

Preliminary work was completed to develop a level 2 workshop aimed at senior field staff to help them further develop their program planning and evaluation skills.

A total of 17 district agriculturist seminar papers were presented over the year.

During 1981-82 there were 15 district agriculturist promotions, retirements, and resignations, causing 45 moves and transfers within the division.

Training and Development Branch

The branch worked in five main areas: farm training programs, leadership, agriculture law, extension liaison and coordination, and agricultural education.

The farm training section was comprised primarily of the green certificate program and the Alberta-Hokkaido exchange program. Exchange activity was in relation to dairy and beef enterprises.

The green certificate program functioned primarily in the same manner as the previous year. New activity with regard to development included computerized testing for trainees (development stage) and the preparation of the trainer's manual. Training was offered in beef, dairy, sheep, swine, dryland crop and irrigated crop farming. A total of 165 training positions was maintained during the year.

One hundred and sixty trainees were granted certificates as indicated below:

	1981-82	1975-82
Level 1	137	498
Level 2	23	149
Level 3	0	25
TOTAL	160	672

The Alberta-Hokkaido international agriculture exchange program continued. This fiscal year was the beginning of the expansion from strictly a dairy exchange to a dairy and beef exchange. Three beef and 10 dairy exchangees arrived early in April, 1981. Three dairy and two beef exchangees went from Alberta to Hokkaido.

The eighth exchange professor from Japan was placed at the University of Alberta while a dairy science professor from the University of Alberta went to Japan for a four-month period of study.

Agricultural tours were popular in Alberta and the branch assisted as follows with regard to instructional-educational tours: 10 one-day tours for journalists, professors, agribusiness heads from Yugoslavia, Japan, Korea, Germany, Canada, Denmark and Guatemala; a two-week educational tour for Mexican veterinary students and a two-week tour for Chinese animal nutrition and health experts from an FAO project for development in Inner Mongolia; and two four-day tours for groups of farmers from Germany and Australia.

In addition, at the regional level, the division assisted with many more agricultural study tours by various out-of-province and international delegations of farmers.

The leadership and training specialist participated in 100 workshops and presentations during the year and dealt with a variety of subjects.

Of particular importance were Agriculture Week programs, family farm arrangements workshops, farm labor management activities and on-farm consultations. All programs were designed to enhance productivity, improve income, increase opportunities for family farm development and to re-vitalize rural communities.

At the farm level, there was an urgent need for information on the management of farm labor and ways of keeping the farm in the family.

The agriculture law section was involved in providing information, resource and counselling for interpreting agriculture laws. Such information was disseminated through all the communication media, prepared opinions, letters, telephone calls, personal interviews and farm law lectures. Producers, farm organizations and agribusiness were the primary recipients.

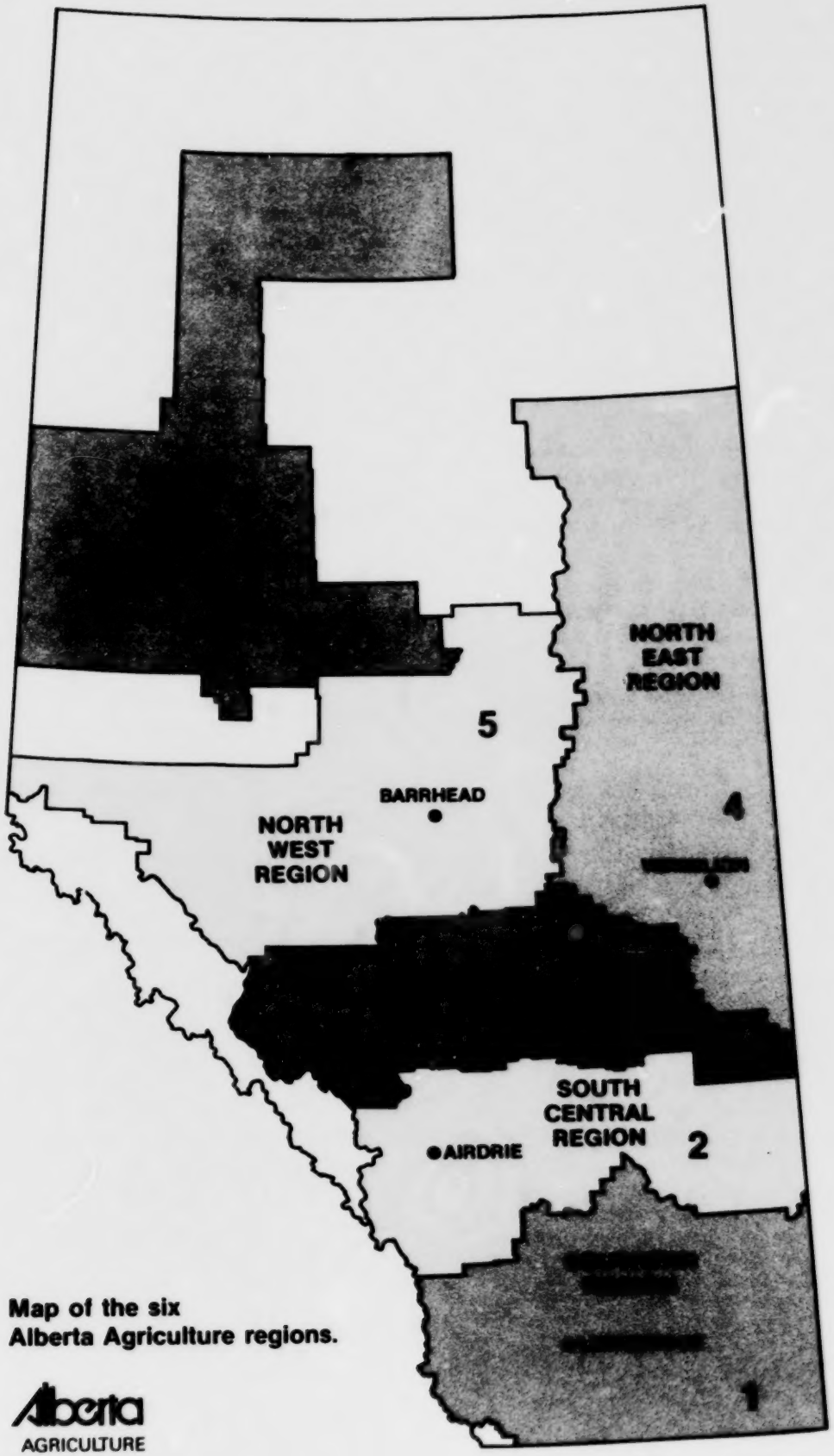
Personal interviews and farm law seminars were the most successful extension methods utilized. Approximately 4,000 people were reached by these methods.

The major programs carried throughout the six regions by this section were:

- farm law seminars — 96 (attendance - 3,500)
- correspondence, telephone and client interviews — 1,628
- departmental enquiries — 228

It was necessary to carry out research with regard to new farm business agreements and their tax implications. Informing the agriculture public of these changes was the responsibility of this section.

The agricultural education section, in cooperation with other agencies and institutions, organized an agricultural education seminar in June 1981. Over 125



Map of the six Alberta Agriculture regions.

Alberta
AGRICULTURE

participants attended the two-day seminar at Olds College, which focused on the outlook and implications of new communications technology, and computer applications for education and extension delivery in the 1980s.

The section up-dated the listing of farm and personal development home study courses offered by various educational institutions and agencies in the province. Demand for this listing indicated an increasing range of clientele and interest.

The agricultural education section continued to assume secretarial functions for the Alberta Agriculture Hall of Fame selection committee. Eighteen nominations were received 1981-82 and four persons were inducted in the Hall of Fame in February 1982.

The section participated in Alberta Advanced Education and Manpower's major review of college farm facilities and programming. The section contributed to Alberta Education's Land and Life curriculum proposal for high schools.

The section was involved in a career planning program and participated during March in seven regional career days held at selected high schools in central and southern Alberta.

The training and development branch continued to provide liaison and coordination with other divisions and branches.

Southern Region Lethbridge (Region 1)

Except for two timely general rains in May and June, the 12-month period ending October 31, 1981 would have been one of the driest on record, causing certain crop disaster for dryland farmers and ranchers. These two rains provided enough moisture for record or near record cereal and forage yields across the region.

Most irrigated crops, with potatoes being the exception, also produced record yields.

Several hailstorms were devastating to crops in some districts, with some farmers being hit who had never experienced hail before.

Department staff, working closely with commodity and special interest groups of producers, were able to report considerable gains in production of special crops, pulse crops and vegetables, especially in areas where producers recognized an opportunity for improvement of cash flow. Greenhouse development increased during the year.

The relatively mild winter of 1980-81 enabled beef producers to report an excellent calf survival rate to help maintain beef numbers in 1981-82. Dairy, hog and sheep production continued to increase in the region. Well established beef producers reported a reasonable year, but beginners and feedlot operators did not. The lack of profit reduced numbers of custom fed cattle and put further pressure on feedlot operators.

The economic pressure on both rural and urban families created a major trend to backyard gardens, resulting in further demands on district agriculturists.

District agriculturists, supported by regional specialists, continued to direct their extension education programs, demonstrations, tours and workshops toward the adoption of new technology to help increase production. In addition, district agriculturists expanded the use of radio announcements, locally produced television programs and newspaper columns to get timely information to producers. Better farming techniques and soil and management practices along with increased irrigation have resulted in a steady increase in agricultural crop production.

Extension programs on weed control, salinity control, vegetable production, urban agriculture, farm credit, finance, enterprise analysis and marketing were requested and generally well attended.

Home study courses on forage production and irrigated crop production were promoted in the region with about 800 producers registered for the two programs. The beef cattle & sheep support program implemented in late January detracted somewhat from the home study courses as well as other extension education programs normally held from January to March. District offices processed over 11,000 claims from over 6,000 producers for the support program.

Cooperative crop demonstrations continued in all districts with emphasis on new varieties, new production techniques, various fertilizer regimes and new methods of applying them, re-cropping dryland and introduction of forage into rotations, cattle implant feeding trials, and herbicides for weed control. Farmers continued to be willing to provide land and other assistance, including allowing department staff access to their farms for numerous tours conducted for area producers.

Other significant undertakings in the region that district and regional staff carried out or cooperated in were:

— a program with agricultural service boards to eradicate knapweed

— a weekly television program, "Agri-Vision", co-hosted by irrigation specialists and district agriculturists

— all district class B & C fairs, exhibitions and numerous bench shows

— the three-year cooperative project jointly funded by extension (regional) and Lethbridge Community College to introduce farm business management programs to the college's adult education and diploma program was concluded in 1982. This program has been incorporated in the Lethbridge Community College diploma program

— agricultural programs and requests for assistance continued to increase on the Blood and Peigan Indian reserves

— district agriculturists and regional specialists responded to an increasing number of producer requests for information on control of soil salinization and questions from planning commissions with respect to annexations, subdivisions and other land taken out of agricultural production

— all commodity groups, farm organizations and industry having common objectives with those of the department continued to receive support from departmental staff. This included an expanding interest in farmers' markets in all districts.

South Central Region Airdrie (Region 2)

The fiscal year started out dry and windy creating a problem of wind erosion of soil. This prompted an interest in such practices as reducing summerfallow acres, reduced tillage operations, and zero-till. There was an increased interest in economics and marketing. Meetings, seminars and consultations about these topics were well attended.

Using the micro-computer at consensus research data meetings proved very positive. Not only could the participant be provided with immediate results, but could see how economic returns would change if particular practices were altered.

Two home study courses were conducted the region.

The forage course registered about 200 and the irrigation course 100.

Livestock producers were interested in marketing subjects, e.g., stabilization alternatives, pre-conditioning programs, and custom feeding.

Developments and issues that involved staff were metrication, surface rights, Rural Crime Watch, Big Country Consortium and the irrigation association in the Cessford area. A grain beetle outbreak in the region was dealt with.

Provincial programs of assistance requiring a considerable amount of time were the beef cattle and sheep support program, feed freight assistance, and the native range improvement program.

New initiatives were taken in the area of servicing acreage owners interested in agricultural production, and developing closer liaison between staff and practising veterinarians.

There were five district agriculturist replacements resulting from staff movement, retirement, and resignations as well as two district agriculturist moves.

North Central Region Red Deer (Region 3)

The main goal of region 3 extension staff was to improve rural productivity and marketing of produce by providing advice on all technical and economic aspects of livestock, crop and farm management.

Producers were concerned about livestock prices, restrictive quotas, rising production costs and interest rates.

Staff concentrated their efforts on production, management and marketing. Four hundred and thirty-four courses were held in the region with over 17,000 participants. Forty-four of these were skill training courses on welding, farm wiring, rural plumbing, machinery maintenance and repair. Courses ranged from one-day seminars to lengthy series. The farm building home study course had over 960 producers registered and 18 support meetings were held with an attendance of 2,400.

The beef cattle and sheep support program was the priority during February, March and April. On an average, 1,200 applications were received in each office. In addition, the district agriculturists managed to complete 2,456 farm calls. Most requests were for assistance in production and management.

The cattle certification program, developed in the Ponoka district, was expanded to two sales in Ponoka and one sale in Rocky Mountain House.

Demonstration plots were used as an important method of extension. These plots demonstrated reclamation, deep plowing, minimum tillage, use of herbicides, Ralgro trials, warble control trials, liming and high moisture barley. Staff have been involved in the review of copper deficiency in the area west of highway 2.

The green certificate farm training program operated at maximum capacity this year, with 32 persons being trained within the region.

The Red Deer and Battle River regional planning commissions were provided with agriculture-related information for the municipal planning committee by-laws, regional plan and subdivision committees. Staff continued to be concerned about land use issues.

Public awareness of government and Alberta Agriculture programs and services in this region increased. A new reporting system was introduced whereby staff only recorded clients who requested information. This resulted in 23,453 office calls and 28,230 phone calls. An increase in service requests by rural people resulted in a suboffice being established in the community of Elnora.

Region 3 staff co-sponsored some large agriculture events in central Alberta including the Alberta Pork Congress in Red Deer, Farm Building Show in Camrose, two farm family seminars in Camrose, 4th Annual Feedlot Management Seminar in Ponoka, barley-canola study in all offices of the region, Canadian ministers of agriculture tour, a regional swine meeting, two regional pasture management seminars, feedlot managers' meeting and several metric workshops.

District agriculturists continued to work with agricultural service boards, seed plants, Alberta Agriculture development committees, agricultural societies, range patrols, farmers' markets, and intergovernment agencies. These took an increasing amount of time with 920 meetings during the past year.

Northeast Region Vermilion (Region 4)

1981-82 was one of the most difficult years for farmers in region 4 for a long time. A combination of economic and physical factors placed most farmers under considerable financial pressure. Interest rates and input costs escalated rapidly during the year, while most farm product prices declined. Region 4 also experienced a severe drought, one which many older farmers compared to the early 1930s. Cereal and oilseed yields were substantially reduced. Hay yields were virtually nil and by late summer most pastures were in an overgrazed condition. A very long and very cold winter further added to the problems of cattle producers. Beef herds were substantially reduced throughout the region with a number of producers going completely out of beef production. Many farmers were forced to make substantial changes to their farming operations as a result of financial difficulties.

Extension staff members were again involved in a wide variety of activities and programs. Farmers were especially interested in information on energy and cost savings — in particular on reduced tillage, continuous cropping, machinery modification and adjustment, and legume plow-down. A major program to help farmers adapt to full metrication of pesticides was successfully carried out across the region in the spring of 1981. Farmer response was excellent. Followup in the summer showed that the conversion went quite smoothly with relatively few problems.

Overall statistics for 1981-82 showed a substantial increase in activity over 1980-81. Interviews were up by 97 per cent and the number of telephone calls increased by 40 per cent, partly because of the beef cattle and sheep support program. Farm visits with clients increased only slightly but attendance at information meetings increased by nearly 50 per cent.

Another region 4 highlight was the operation of the green certificate farm training program, which has been very well accepted for several years. In 1981-82, five trainees achieved level 1 and five achieved level 2. Forty new training farmers were initiated during the year.

Northwest Region Barrhead (Region 5)

Spring confirmed fears of severe winter killing of legumes, especially older stands of alfalfa. Damage within individual fields ranged from slight to complete, with an overall reduction of 40 to 50 per cent of alfalfa stands.

A dry cool spring allowed almost continuous field work from April 20 to the end of May. Germination of later sown small-seeded crops like canola and forage was slow and uneven. Total rainfall during May through September was near normal at 275 to 300 mm but nearly one-half fell in July. High temperatures in August caused abnormally rapid maturing of cereal and oilseed crops. Barley was affected most with potential bumper crops being reduced by 10 per cent to 20 per cent as a result of shrunken kernels. The final yield was about equal to the previous five-year average. The weather in 1981 was the best for harvest operations in the past 10 years.

Hay production was above average in the region and quality was good. A considerable amount of hay was sold from this region to areas in regions 4 and 6 which suffered from drought. Pasture production was only fair because of below-normal moisture in late summer. As a result, several pastures suffered severe

overgrazing and went into winter in a weakened condition.

Livestock was grazed on grain stubble much longer than normal. An open fall with reasonable temperatures until early December prompted an over-selling of fodder reserves. An extremely cold winter and a prolonged spring resulted in a very tight hay market. Regional veterinarians reported several cases of malnutrition resulting in an above average incidence of calving problems in spring of 1982.

Farmers in the region have been severely squeezed by low grain prices and increasing fuel and other input costs. Market opportunities for barley have been limited because of low quota levels.

Lack of profitability for cow-calf enterprises prompted some herd reduction last fall. Hog producers participating in the pork producers' market insurance plan were able to obtain some relief from the very low hog prices which existed for most of the 1981-82 period.

The green certificate program in region 5 grew this year to 30 trainees from 25 as a result of increased interest. Twenty-nine level 1 certificates and four level 2 certificates were issued. The number of trainees who left farming when they completed the program decreased.

Successful two-day training workshops (with 25 in attendance) and trainee workshops (with 40 in attendance) were conducted during the year. In addition, the level of trainee involvement in local off-farm training sessions (including district agriculturist's courses) increased significantly.

Labor management and farm safety continued to be important in this region.

Total client contacts increased remarkably during this reporting period. A great number of these contacts were in regard to the beef cattle and sheep support program. In total, 28,946 office interviews were recorded (up from 18,791 in 1980-81); 3,459 farm calls were conducted (down from 4,199 in 1980-81). In addition, 277 educational courses were conducted covering a wide range of technical and management topics. Over 7000 producers were reached at these sessions for an average attendance of 28 per meeting. Some 857 other agricultural-related meetings were attended by district staff, is up from 818 in 1980-81.

Numerous topics were covered in extension programming, however, special emphasis was given to pasture management, dairy production and management, and the topic of inter-generation farm transfers entitled "Keeping the Farm in the Family." The latter program had over 600 registered participants at Westlock and at the University of Alberta campus.

Other areas of special note were several seminars on calf management, special crops production, barley production, acidic soil management, artificial insemination and the animal health home study course. The total enrollment from region 5 in the latter was approximately 1,300.

District and regional staff were also involved in a multitude of Alberta service board demonstration projects, and a number of special projects.

Peace River Region Fairview (Region 6)

Region 6 continued to direct its activities and principal programs towards achieving the long-term objectives of the department: emphasizing increased agricultural production and efficiency, improving farm incomes and increasing opportunities for family farm development. Extension staff also continued to assist in the development of rural communities and in the expansion of agribusiness service industries.

Considerable emphasis was placed on feed grains, forage seed and forage for feed. There was a declining interest in canola production on the part of producers. Interest in the north Peace in forage production culminated in the formation of the North Peace Forage Association which will serve several districts.

While attendance at crop production meetings declined significantly, attendance at livestock meetings increased approximately fivefold. Interest in a successful pre-conditioned calf sale was high.

Farmers expressed keen interest in meetings dealing with farm machinery, grain handling and storage and soil conservation. Attendance at meetings increased by 300 per cent.

Major demonstrations throughout the region on liming, weed control and forage pest management were initiated.

Clients had a strong interest in the new federal budget and many well attended meetings were held to discuss the tax implications. In addition, meetings on marketing were also well attended. There were twice as many meetings on economics and marketing with a 200 per cent increase in attendance over 1980-81.

The region's programs on soil conservation increased with greater agricultural service board expenditure and the activity of the regional soils specialist.

Farm water supplies continued to be a problem in a year of low snowfall. The dugout pumping program was extremely active. The region embarked upon an

extensive program for individual farmers to improve their water supplies.

Staff were active with agricultural development committees in the area of Crown land disposal and studies on crop insurance. Staff participation in agricultural service board activities increased, as did involvement in agricultural societies programs and events.

Fairview College and region 6 staff continued to cooperate on several major programs. District staff acted as members of key college advisory boards which plan agricultural education programs.

Phone and client interviews increased over last year. Farm calls increased from 2,389 last year to 3,453 this year. This increase included 823 new farm calls by district agriculturists. Many of these calls were in the developing areas which have been a priority in this region.

Support staff had 11,397 office interviews and made 11,472 phone calls responding to inquiries by Peace region producers.

EXTENSION DIVISION
DISTRICT OFFICE STATISTICAL PROFILE OF
MEDIA EXTENSION AND MAJOR ADVISORY MEETINGS (PROVINCIAL TOTAL)

MEDIA EXTENSION RECORD

Newscolumns	2,498	No. of papers	1,129
Newsletters	2,695	Total circulation	224,384
TV Programs	97	Radio broadcasts	669
Publications distributed	103,334		

NUMBER OF MEETINGS

Agricultural service boards	698
Agricultural societies	308
Municipal seed plant boards	546
Extension advisory committees	172
Total meetings (including tours)	2,337
Attendance at tours	2,948

Key To District Office Monthly Reports — (See graph on page 28)

COMMERCIAL CROPS — management, rotations, culture, varieties, soils, pests, weed control, fertilizers, diseases, harvesting, storage and protection, and related policies and services i.e., all aspects of production, and protection technology of these crops. Also crop and hail insurance, metrics.

LIVESTOCK — management, husbandry, breeds, breeding, nutrition, ROP improvement, pest control (except diseases), brand products, shows, programs and related policies, i.e., all aspects of production and protection, technology and related policies of services.

HORTICULTURE — essentially includes all non-commercial operations and contacts relating to gardening, trees, shelterbelts, landscaping, ornamentals, pests, diseases and all aspects related to production, protection and services, i.e., includes farms, acreages, and urban.

ECONOMICS — *Farm business management* — production economics, agribusiness, records, bookkeeping, business analysis, agreements, contracts, estate planning, taxation, wills, management of capital, labor and other resources and all related programs, policies services, workers' compensation, computers. *Credit Financing* — credit, capital, agencies, loans, ADC interest, insurance, mortgages. *Marketing Processing* — information, outlook agencies, standards, grades, transportation, distribution, policies, programs, legislation, products, promotion, boards, commissions, supply demand, raw materials, future prices, contracts, quotas and similar related.

ENGINEERING — *Buildings and utilities* — Farmhouse and all other buildings, plans, materials, contracting, construction, heating, electrical, ventilation, water, sewage manure disposal, codes regulations, protection including insurance, utility costs and services, wells, dugouts and lagoons, metrics. *Drainage conservation* — water management, erosion control, soil salinity, soils management, conservation, alkali, soils problems, re-grassing, reclamation and related policies, programs and services.

PUBLIC SERVICES (AND REFERRALS) — Public contacts and enquiries for general farm agriculture information. Alberta Agriculture programs, programs and services of other departments divisions, etc. Public relations, schools, casual office visitors, referrals, tours, itineraries, metrics, consumer information other than home economics, etc.

COMMUNITY SERVICES — contacts and services related to agricultural societies, fairs, exhibitions, facilities, prize lists, classes, awards, shows and public relations with Chamber of Commerce, service clubs, farm, commodity and other rural organizations.

MISCELLANEOUS — for items that do not fit into other categories.

LAND USE/SURFACE RIGHTS — all matters related to agricultural non-agricultural land use; subdivision development, annexation, property taxation, environment, right of entry, surveys, land classification, assessment, agreements compensation, reclamation, protection, etc.

HOME ECONOMICS/FAMILY LIVING — all aspects of home economics resource and DHE support. Food, nutrition, clothing, textiles, appliances, consumer information, home and family records, personal development, management, consumer credit and protection; etc.

ANIMAL HEALTH/VETERINARY — animal health, diseases, problems, nutrition related programs, poisoning, meat inspection, protection, drugs, veterinary supplies, services.

4-H ACTIVITIES/RESOURCE — full range of various 4-H contacts and support, projects, programs, leadership, and all involvement in resourcing programs.

FARM TRAINING/GREEN CERTIFICATE — on-farm training, beginning farming, trainees, training farms, programs, interagency contacts, skills, tools, evaluation, testing, training plans, courses, modules. Includes various exchange programs (IAEA, Hokkaido, etc) and agricultural career counselling, agricultural curricula, Land and Life, etc.

IRRIGATION — water management, licensing, distribution, power systems, irrigation methods; sprinklers, pivots, control structures, fertigation, soil salinity and drainage related to irrigation; costs, benefits, economics and policies and programs.

EXTENSION DIVISION
DISTRICT OFFICES STATISTICAL PROFILE OF SUBJECT AREA ACTIVITIES (PROVINCIAL TOTALS)

	SUBJECT AREAS OF CONTRACT	OFFICE INTERVIEWS	TELEPHONE CALLS	FARM VISITS	LETTERS	TOTAL INDIVIDUAL CONTACTS	EDUCATIONAL PROGRAMS: NUMBER OF COURSES	EDUCATIONAL PROGRAMS: COURSE ATTENDANCE
	TOTAL NUMBER OF CLIENT CONTACTS	126 868	144 012	16 988	35 456	322 924	1 561	53 260
FARMING CROPS	CEREAL CROPS	18 426	18 866	4 140	1 732	43 164	203	7 181
	FORAGE CROPS	7 344	9 453	1 897	1 837	20 521	78	2 447
	OILSEED CROPS	2 598	3 694	925	430	7 647	29	1 152
	SPECIALTY CROPS PULSE VEG ROW	1 841	3 011	655	895	6 402	24	1 177
LIVESTOCK	BEEF CATTLE	8 891	11 372	2 134	4 626	27 023	150	4 524
	HOGS	3 218	3 339	305	448	7 310	25	885
	OTHER LIVESTOCK	2 121	2 887	952	990	6 957	38	1 496
	DAIRY	1 848	2 546	526	674	5 594	20	1 547
	GARDENS TREES LANDSCAPING ETC	14 025	21 255	2 766	5 172	43 218	121	3 864
FARM BUSINESS MGT	CREDIT FINANCE	6 012	8 036	573	2 105	16 726	21	1 192
	FARM BUS MGT	5 151	5 841	642	1 306	12 940	156	5 786
	MARKETING PROCESS	1 835	2 765	438	776	5 814	41	1 742
ENGINEERING	BUILDINGS AND UTILITIES	4 200	5 593	752	790	11 335	70	1 307
	DRAINAGE AND CONSERVATION	2 368	4 202	664	1 317	8 571	21	616
	MACHINERY	1 955	3 323	416	332	6 026	90	2 243
	PUBLIC SERVICE AND REFERRALS	4 104	5 820	145	2 513	12 582	88	1 450
	COMMUNITY SERVICES FAIRS AG SOCIETIES	4 066	5 430	466	1 831	11 793	117	5 370
	MISCELLANEOUS	2 815	6 090	238	1 598	10 741	25	881
	LAND USE SURFACE RIGHTS	2 233	3 659	1 031	1 409	8 332	68	2 672
	HOME ECONOMICS AND FAMILY LIVING	1 372	2 289	79	1 221	4 961	6	279
	ANIMAL HEALTH VET	1 413	2 182	259	521	4 375	39	1 100
	4-H ACTIVITIES AND RESOURCE	959	1 504	77	658	3 198	51	2 181
	FARM TRAINING GREEN CERTIFICATE	808	1 227	234	289	2 558	18	668
	IRRIGATION	761	1 071	155	182	2 169	12	390
	ALBERTA BEEF & SHEEP SUPPORT PROGRAM	35 143	15 016	344	830	51 333	9	292

YEAR APRIL 1981 TO MARCH 1982

HOME ECONOMICS AND 4-H DIVISION

The division focused its attention during 1981-82 on the development of the individual, the family, the community and the agriculture industry. Advisory services and educational programs were provided in the areas of food and nutrition, family resource management, clothing and textiles, housing and family living. Support to 4-H was provided through preparation and distribution of project and program materials to clubs, coordination and implementation of provincial programs, leadership and national activities. District and regional staff worked together to plan inter-club activities, coordinate regional events and assist clubs for participation in 4-H programs.

Many requests from other provinces and agencies were received for Alberta 4-H publications and materials.

Media use increased for disseminating information to the general public. Home economics field staff were involved with over 1100 radio broadcasts and approximately 160 television shows.

Computer technology had an impact on programming; the division utilized word processing equipment and micro-computers in program development and in delivering programs to rural Albertans.

During 1981-82, the division employed 108 staff members: field staff supported by subject matter specialists. Summer and winter project staff were also recruited to assist in the development and delivery of home economics and 4-H programs.

Home Economics Branch

Home economics educational programs and advisory services were provided to rural Albertans through a network of district home economists located at 61 district office locations. District home economists-in-training and nutrition learning coordinators were located at selected offices. They were supported by six regional home economists, and 12 home economics specialists, as well as additional resource persons employed to conduct specialized programs.

In addition to branch programs and services planned and implemented in the regions, the branch also carried out several province-wide activities. Nutrition at school continued as a department program in which branch staff were involved (see Nutrition at School report page 52). The branch again sponsored Alberta Women's Week held at the Olds College in July. Together with the Alberta Women's Institute, the branch staged five workshops throughout the province which focused on the theme "From Producer to Consumer — Public Opinion Versus Facts."

Family resource management stood out as the significant program area in 1981-82. Scarce financial resources resulted in families looking for ways to reduce expenditures on clothing, food and shelter. Programs aimed at reducing expenditures both through better choices in the marketplace and increasing skills in home production were in demand.

Stress resulting from changing economic and social conditions continued to create a demand for programs aimed at improving personal management of time. A new area of considerable interest was that of the two generation farm family.

Two public service announcements were produced in cooperation with the broadcast media branch for airing on television and, in the case of one, on radio as well. One public service announcement promoted correct food preservation methods while the other carried a nutrition message on the theme of "Eat Right Alberta."

All branch staff participated in Update '81, a staff development program offered by the branch's home economics specialists and others. Throughout the year, the specialists were involved in producing current information and teaching resources for use by field staff. The home economics specialists produced a number of home economics publications for public distribution. As well, they contributed numerous articles for release in the press and in professional publications.

The branch was represented on a number of provincial, regional, and district committees as a means of coordinating efforts with related government departments and community agencies. This resulted in more effective programming and more efficient use of resources.

To increase its understanding of the changing needs of its public, the branch, together with the planning and research secretariat, initiated a study on the need of nonmetropolitan families for home economics education. The results of this study will help in developing program direction for the branch.

Southern Region Lethbridge (Region 1)

Individual client contacts were down by about 20 per cent from 1980-81. District home economists spent more time and effort communicating by means of the

mass media this year. Fewer and smaller schools were on the nutrition at school program. Clients were more selective in choosing projects they wished to participate in, as financial pressure and time commitments increased.

Over 2,000 individual contacts were made on product promotion. Five thousand copies of the publication *Made in Southern Alberta*, were distributed through local stores.

A change in the format and time of the DHEs' television show resulted in a larger viewing audience. Three DHEs shared the duties of hostess on the show, aired between 12:00 noon and 12:30 p.m., Tuesday, on CFAC, Lethbridge.

Two judging workshops were held in the region to train judges for agricultural society bench shows.

The "Cope" series have been the most popular publications this year. Home management was the only area showing a greater number of client contacts this year, with a 10 per cent increase. Home study courses on home management topics were well received.

Feedback from the Housewives' Conference and the Nanton Women's Conference indicated that women want to get involved in organizing these conferences for themselves.

Housing contacts dealt with related to remodelling, energy conservation, and solar energy.

The management of time, money and energy were identified as having a high priority for DHE programs in 1982-83.

South Central Region Airdrie (Region 2)

The focus of district home economist programming in 1981-82 was directed to family resource management education. District home economists in eight district offices worked intensively with individuals and rural families to assist them in making wise financial management decisions. Major activities initiated and carried out included the following: agriculture production and management courses for women, particularly for those whose husbands are engaged in off-farm employment; *Cope...with Family Finances*, a self-directed teaching package of family and financial record books primarily for farm families; programs titled "Cost Cutters" provided participants with practical ideas for reducing family living costs in the areas of foods and nutrition, clothing, and home management; the "Coping in the Canadian Economy" seminars met with a positive response from district clientele. Presentations dealt with understanding inflation, tax implications of the new budget, and investing money in an inflationary economy.

This past year saw an increase in consumer requests for reliable, unbiased consumer information. Appliance Buymanship programs helped clients become more competent in evaluating consumer goods and services. District home economists provided updated materials and training sessions to microwave management instructors, thus broadening the base for delivery of home economics programs.

In addition, information was extended to the public by means of press releases, radio broadcasts, the Calgary region newsletter, grocery-bag stuffers, "brown bagger" sessions, and point of purchase displays. Participation by new clientele in these program activities increased significantly over previous years.

Staff responsible for home economics programs made a special effort to write comprehensive district situation statements. This activity contributed to more effective program leadership.

District home economists and home economics programs continued to interact with a variety of groups, agencies, and community organizations. There was a need to represent and interpret home economics to these groups, and when appropriate, to cooperate with them in joint programming efforts. Home economists were also involved in updating programs dealing with various aspects of nutrition, textiles and clothing, energy management, and 4-H leader development.

North Central Region Red Deer (Region 3)

In an attempt to assist families to reach individual and family goals by effectively managing human, material, and natural resources, district home economists of the north central region integrated the theme of resource management into all extension activities, educational courses, media presentations, individual counselling, and home visits. All staff developed district situation statements and work plans.

Specific programs designed with this goal in mind included: stress management, two-generation farm families, energy conservation, retrofitting, energy-efficient home plans, financial management and estate planning, management of the clothing dollar, and a variety of sewing courses, nutrition education, home production workshops, and women in farming.

A number of projects were initiated with the following objectives: to increase the visibility of the home economics branch, to project the importance of

agriculture in central Alberta, and to develop the leadership skills of members of rural organizations.

A tabloid written by DHEs on the general theme of fitness, but which included articles spotlighting farm families and agriculture, was piloted as a newspaper insert in the region and distributed to approximately 75,000 readers.

A workshop offered in conjunction with the Alberta Women's Institute focused on the image of agriculture and the promotion of Alberta food products from farm to table.

New groups to ask for assistance were the wives of pork producers who hoped to become active in the promotion of pork products. Staff involvement on the board of directors of the Alberta Pork Congress continued with major responsibilites being ladies' education and consumer education.

DHEs continued to work closely with other agriculture staff, further education councils, agriculture service boards, local health units, early childhood services, and other community organizations with the aim of enhancing the physical, economic, and social well-being of rural families.

Northeast Region Vermilion (Region 4)

The goal of district home economists in region 4 was to work with families to improve their physical, economic, and social well-being. Programs, workshops, individual counselling, and distribution of information through the mass media were used.

Food and nutrition education and information were provided to adult groups and individual clients by various means (programs, workshops, newsletters, newscolumns, radio, television, and individual counselling). Also all home economists were involved in nutrition education programs for early childhood services groups as well as nutrition at school.

Assistance was given to clothing and textile groups and to individuals through workshops and educational seminars in such areas as wardrobe planning, purchasing of fabrics and ready mades, clothing construction basics, as well as in specialized areas such as outerwear, tailoring, blazers, and pants.

Home economists made special efforts to emphasize the importance of planning and budgeting. Two hundred new registrants were obtained in the "Cope" series. Metric workshops and microwave management workshops were also very popular. There was a considerable increase in individual counselling of clients in consumer product information.

DHEs worked cooperatively with the regional 4-H specialist, district councils, and 4-H leaders in organizing and resourcing 4-H events. Three leadership workshops were conducted. Staff were involved in a 4-H project book competition, a winter camp, a beef cook-off, as well as numerous 4-H public speaking events, information nights, and achievement days.

Home economics information and leadership skills were provided by home economics branch staff in joint programming with other agencies in the community, i.e., further education councils, agricultural societies, agriculture service boards, early childhood services, health units, and preventive social services.

In 1981 region 4 hosted the provincial agriculture service board annual tour, a cooperative effort between the extension division, home economics branch, municipality and local improvement district personnel.

Noon programs were carried out in some districts. Also a nutrition questionnaire was conducted with all grade 10 students.

Northwest Region Barrhead (Region 5)

District home economists in region 5 provided a variety of educational opportunities through individual contacts, meetings, workshops, courses and resources at local community groups in an effort to meet the objectives of the branch and department. The trend towards more one-to-one contact continued. As a result of poor winter weather there was a decrease in the number of courses offered; attendance dropped by one-third.

Staff worked with 4-H councils, further education councils, agriculture societies, early childhood services, advisory committees and interagency groups as well as other community associations. There was increased contact with local fair boards and a judges' workshop was conducted to provide training and updating.

Preparation of district situation statements and involvement in program planning with the extension division resulted in the printing and distribution of *Agriculture and Home Economics Extension Programs — Northwest Region*. A joint regional program, "Keeping The Farm In The Family", was offered during Agriculture Week. Other joint activities were carried out at the district level enhancing the educational quality of programs offered to the total farm family.

Media emphasis changed from doing a weekly television show to more work with radio and newspapers. Distribution of the regional newsletter increased.

Educational programs in management and finance and clothing and textiles remained high. Services in food and nutrition increased with more interest being expressed in food preservation. Requests for housing information were down. Programming generally reflected the concerns of a depressed economy.

Staff were involved in special programs for Agriculture Week and Nutrition Week. Involvement in 4-H continued to emphasize support to new clubs, leader training, and work with district and regional councils.

District home economists in the region introduced two new programs. All food and clothing programs were done in metric with participants receiving metric measures. Metric oven stickers were developed and distributed to encourage the use of metrics in the kitchen. A Christmas program with display and demonstration materials was developed and presented at 14 workshops throughout the region.

Peace River Region Fairview (Region 6)

The focal point of the home economics programs in the Peace region was the Farm Wives' Conference in High Prairie. The theme, "It's Up to You," provided the base for sessions aimed at farm women who made up most of the audience. Sessions emphasized how individuals could promote the success of their families and communities.

District work focused on the same theme. Courses and programs were held to teach practical skills. Various extension techniques were used.

An information day was held to teach lay instructors new techniques and to update them on advances in the area of clothing and textiles. Retailers were invited to attend so that they could more ably make decisions as to what materials to stock. A special workshop was held to give other professionals and instructors information on clothing for the handicapped.

Housing was seen as an area of interest in this region. DHEs worked with clients in the areas of planning, building, and renovating. An important program emerged concerning the improvement of trailers, involving both home design and energy efficiency.

Home economists were involved in community organizations. Both the Women of Unifarm and the Alberta Women's Institute received programming assistance from home economists, as did other groups, such as the Opportunity Corp and homemaker aides.

A regional committee provided DHEs with in-service training for future programming on improving water quality and quantity for farm families.

KEY TO STATISTICAL PROFILE — (see page 33)

FAMILY LIVING: Items relating to individuals and families. (communication, development, effectiveness, etc.)

COMMUNITY WORK: Items relating to groups and organizations in the community. (special events, societies, agencies, boards, referrals to other professionals).

HOME MANAGEMENT: Resource management, appliances, consumer protection, etc.

FOOD & NUTRITION: All aspects of foods and nutrition except Nutrition at School.

CLOTHING & TEXTILES: Fibres, finishes, fabrics, selection, care, construction, home accessories and textile arts (crafts).

HOUSING: Design, materials, construction, home furnishings.

4-H: Councils, leaders, members, promotions, projects, activities and special events.

NUTRITION AT SCHOOL: Contact with parents, students and teachers.

AGRICULTURE RELATED: All items relating to livestock, commercial crops, engineering, irrigation, veterinary, farm training and horticulture.

FINANCE & ECONOMICS: Business management, agribusiness, bookkeeping, credit, taxation, etc.

MARKETING & PROMOTION: Marketing boards, product information and promotion, Farmers' Markets, etc.

HOME ECONOMICS BRANCH
STATISTICAL PROFILE OF
SUBJECT AREA ACTIVITIES (PROVINCIAL TOTALS)

SUBJECT AREAS OF CONTACT	OFFICE INTERVIEWS	TELEPHONE CALLS	FARM VISITS	LETTERS	TOTAL INDIVIDUAL CLIENTS	EDUCATIONAL PROGRAMS: NUMBER OF COURSES	EDUCATIONAL PROGRAMS: COURSE ATTENDANCE
NUMBER OF CLIENTS	20,941	63,027	2,625	31,087	117,680	3,028	66,692
FOODS & NUTRITION	6,103	19,409	455	9,760	35,727	1,104	22,655
HOME MANAGEMENT	2,154	7,376	174	3,219	19,923	350	7,095
CLOTHING AND TEXTILES	2,512	8,756	247	4,065	15,580	855	9,168
COMMUNITY WORK	2,149	8,069	394	3,712	14,324	165	3,372
HOUSING	2,237	5,197	649	2,327	10,410	176	3,418
NUTRITION AT SCHOOL	620	3,576	538	5,344	10,078	373	16,610
4-H ACTIVITIES	1,916	4,503	137	2,153	8,709	154	6,237
MISCELLANEOUS AGRICULTURE RELATED	1,839	3,110	163	569	5,681	33	1,518
FAMILY LIVING	554	1,968	63	1,382	3,967	151	3,202
MARKETING AND PROMOTION	277	359	70	1,735	2,441	24	1,245
FINANCE AND ECONOMICS	339	634	15	550	1,538	31	878

[illegible] CONTACTS

YEAR
APRIL 1, 1981
MARCH 31, 1982

1. FIGURES FOR NUMBER OF CLIENTS IF LESS THAN CLIENT CONTACTS ONE CLIENT MAY BE CONTACTED ON MORE THAN ONE SUBJECT AREA

4-H Branch

Major emphasis, through increased promotion, was placed on expanding public awareness of the educational aspect and social values of 4-H.

Throughout the year, the 4-H branch concentrated on further development programs, discussed and evaluated administrative procedures, and developed statements of strategy regarding future direction for 4-H.

A report on phase 2 of a study of 4-H in Alberta was completed. Phase 3, the development of an action plan for the implementation of recommendations of the 4-H research study, was being prepared.

Since 1977, the 4-H Foundation has received a total of $214,419 in donations for the development of the Alberta 4-H Centre at Battle Lake. Promotional work has been carried out in an effort to reach the goal of $1.5 million.

The Alberta 4-H educational award winners were selected. The twenty-one 4-H members received scholarships totalling $10,650.

The 4-H farm safety program designated April as 4-H Farm Safety Month. This program stimulated public awareness of farm safety.

The 4-H pheasant project reached its peak. The 424 4-H'ers involved in the program raised 17,525 pheasants this past year. In addition, the project received a $21,000 grant from the Recreation, Parks and Wildlife Foundation to further develop the habitat project by January, 1983.

Five hundred nutrition kits were published for the food project clubs. The kits, called Nutrition Fun, contained educational material and Canadian Food Guide nutrition information.

Outdoor educational projects, such as the Regional Camping Program, continued to grow in all regions. During the summer, 12 camps operated in the regions with an overall attendance of 896 members.

The seven regions were staffed by nine regional 4-H specialists. The specialists provided the vital communication link between 4-H members leaders and the 4-H branch. They consulted in all areas of activity, events, projects and meetings at the club, district, regional, and in many cases, provincial level. The specialists assisted in organizing clubs to take part in such community activities as the annual highway clean-up, mall displays, exhibits, and the farm safety program.

During the annual achievement day(s), beef club members earned approximately of nearly $4 million in cattle sales.

Sixty-four members were chosen to represent Alberta at various national and international 4-H events throughout the year.

Major 4-H events during the year included the fourth annual provincial public speaking finals held in Edmonton, club week programs during the summer held at Olds College and the Camrose Lutheran College, and provincial livestock and dairy shows. Sixty-four delegates, including 4-H members from Montana and Saskatchewan, participated in a week-long conservation camp. Twenty light horse clubs participated in the horse bowl competition, seminar and judging contest.

Three hundred 4-H delegates participated in Open House Canada, a youth exchange program. Three communications festivals for speech education were held this year with an over-all attendance of 274 members.

A number of workshops provided volunteer leaders with the opportunity to learn and share new ideas on 4-H projects. Guest delegates from Nova Scotia, Saskatchewan, Manitoba, and Montana joined 280 Alberta leaders at the annual leader's conference.

Celebrating its twentieth season, "4-H Clubtime" produced 30 one-half hour television programs. "4-H News Roundup," a weekly radio program aired on 17 Alberta radio stations, completed its third season.

4-H Branch Client Contacts

A. Individual	
Telephone	19,325
Letters	6,627
Home visits	284
Office visits	2,506
Mailouts	1,261
Copies Circulated	81,965
B. Media	
Radio	417
Newspaper	825
Television	50
C. Group Activity Participants	
Project related	21,462
Training workshops	2,134
Leader Development	1,468
Travel and Exchange	2,099
Media	927
4-H Promotion	12,627
Camping	1,894
Communications	3,382
Council Meetings	3,875
Other	7,569

Alberta 4-H General Statistics

Actual membership by place of residence:

	boys	girls	total
Rural farm:	3300	3824	7124
Rural non-farm:	213	509	722
Urban:	150	464	614
TOTAL	3663	4797	8460

Total number of clubs: 575
Total number of adult volunteer leaders: 1829
Average age of 4-H members: 13.39
Average tenure of 4-H members: 2.93

Summary of Alberta 4-H Project Enrolment

(based on 1980-81 4-H Club Year)

Project	Boys	Girls	Total
Automotives	51	16	67
Beef	2317	1749	4066
Canine	13	21	34
Clothing	3	1107	1110
Crafts	47	358	405
Dairy	153	119	272
Field Crops	33	7	40
Foods	48	369	417
Garden	17	36	53
Interior Design	0	14	14
Jr. Leader	33	102	135
Leather	86	88	174
Light Horse	498	1151	1649
Outdoor	54	21	75
Photography	25	35	60
Poultry	6	0	6
Rabbit	4	27	31
Self Determined	31	68	99
Sheep	207	22	229
Small Engines	64	1	65
Snowmobile	12	10	22
Speech	15	9	24
Beet	14	10	24
Corn	18	8	26
Swine	16	3	19
Tractor	6	7	13
Veterinary Science	61	18	79
Woodwork	58	24	82
Pheasant	203	221	424
Total project enrolment	4103	5621	9724

ENGINEERING & RURAL SERVICES DIVISION

The division responded to new demands to meet the changing needs of the farm population. Administrative staff were directly involved with programs of farm safety and manpower in addition to undertaking their normal functions.

Farm safety personnel were active in provincial, national and international farm safety programs. Provincial activities included holding 85 farm safety workshops, providing a mobile safety display to 20 agricultural fairs, revising the farm safety guide, and distributing over 50,000 safety coloring books to grade 1-4 school pupils. Three thousand poster calendars and 500 teacher kits were also provided to Alberta school teachers. A project was undertaken in cooperation with the Farm Implement Dealers' Association of Alberta and B.C. which provided a contest for farm inventors to share ideas on how to prevent farm machinery accidents. The farm accident monitoring program with 35 rural hospitals cooperating also provided useful data for further program development.

Agriculture manpower programs continued to be very actively used. One thousand and thirty students were assisted with temporary employment under the priority employment program. Liaison and cooperation with the Canada Employment and Immigration Commission continued to assist in the delivery and evaluation of these activities.

The water well recovery program provided grants of $71,454 to 23 farmer applicants.

RURAL SERVICES SECTOR

The rural services sector was comprised of the agricultural services branch and the community services branch. The primary objective of this sector was to work closely with local government and local communities in program development and delivery.

Agricultural Services Branch

The agricultural services branch provided administrative and operative support to agricultural service boards and agricultural development committees. Sixty-four agricultural service boards operated in Alberta in 1981-82. Under broad department guidelines, each board developed a local program for warble control, livestock and crop demonstrations, weed control, soil conservation and extension, and signed a memorandum of agreement with Alberta Agriculture. Department grants of $3,470,000 supplemented moneys expended by local governments in delivery of these programs.

In-service training programs with agricultural fieldmen, agricultural service boards and regional meetings with chairmen were provided to increase understanding of the purpose of agricultural service boards and the development of programs. Regional and provincial conferences for service board personnel were also arranged which provided on-going program evaluation.

Sixty agricultural development committees continued to operate in Alberta. In addition to providing an appeal and recommending mechanism for the public land disposition branch of Alberta Energy and Natural Resources and the Agricultural Development Corporation, these committees evaluated government policy at the local level and advised the Minister and government administrative personnel. A provincial information conference was held in November for committee members.

Committees assisted in the development of policies and programs in Alberta by identifying the needs of rural residents, the impact of programs, and the effectiveness of program delivery.

Community Services Branch

The community services branch provided administrative and program support to 256 agricultural societies in the province. Financial support for programs such as exhibitions, fairs and displays was provided, as well as assistance in the construction and operation of multiple use facilities to accommodate programs and to improve community life in rural Alberta. Fifty capital grants of $16,509,000, one hundred and sixty operating grants of $3,811,765 and 121 fair grants of $214,870 were provided.

Regional workshops continued, and along with the annual meeting and seminar of the Alberta Association

of Agricultural Societies, have gained support for the agricultural societies.

Agricultural societies are recognized as valuable organizations capable of drawing together a variety of age and interest groups from the farm and non-farm community, to undertake a wide range of projects and programs to meet community needs.

Engineering & Home Design Sector

Staff of this sector provided agricultural engineering and home design service to Alberta residents. In addition to the activities reported, over 800 farmers were served in 1981 under the dugout pumping program.

Approximately 1,000 farmers participated in courses to develop particular skills in welding, electrical wiring, mechanics, farm building, plumbing, and air conditioning equipment.

Engineering Field Services Branch

The engineering field services branch staff aided farmers in increasing production and improving farm income by providing expertise in agricultural engineering. Assistance in the areas of structures and environment, power and machinery, waste management, soil and water, processing and materials handling were provided on an individual basis. Seminars and reference material were provided for the farm buildings home study course introduced in region 3 in 1981-82.

The farm implement act administration assisted farmers in resolving complaints (warranty, service, repair parts) relating to farm machinery. The administration also licensed and bonded farm equipment dealers and distributors and dealt with complaints in order to improve service to the producer. The number of complaints was down considerably in 1981-82 compared with previous years. A revised Farm Implement Act received legislative approval.

Engineering Resource Branch

The branch provided engineering advisory services to farmers and a resource service to department staff through the activities of specialist engineers and technologists. Research, development and demonstration activities were major areas of involvement. Several publications were completed.

Activities related to soil and water included demonstrations and public seminars at various locations on farm water resource development and management. Studies on drainage and runoff continued and promising results were demonstrated with dugout aeration. The first phase of an on-farm application of a wind-powered air pump for water livestock was completed.

Demand for plans through the farm building plan service decreased, with 4,000 plans being distributed. The most marked reduction in demand was for dairy plans, while there was some increase in demand for plans for beef equipment and cattle sheds. Trends toward energy conservation were reflected in increased interest in natural ventilation in buildings, semi-confinement livestock housing, and energy conservation technology. Metric plan development was delayed awaiting progress within the building industry. Consultation with commercial builders continued to be a high priority in order to encourage quality technology and good design practices.

Energy-related projects and activities and enquiries from the farming public increased during the year. Several energy publications were produced and in demand. Seminars and lectures relating to energy on the farm, conservation practices, fuel costs and alternative energy sources were presented. The department's energy committee participated in discussions related to a possible national farm energy conservation task force; contributed to the national farm energy use survey; cooperated with Alberta Treasury with regard to the Alberta farm fuel distribution allowance; reviewed documents related to energy demand restraint prepared by the Energy Supplies Allocation Board and participated in hearings of the Energy Resources Conservation Board related to the energy requirements of agriculture in Alberta.

Farmer enquiries relative to farm machinery tended to be production orientated and very specific. The trend was toward improving the performance of machinery systems while reducing the impact of rapidly increasing costs. Farmer turnout at seminars was good, especially in region 4. The results from five years of research on zero tillage in the dark brown soil zone indicated control of green foxtail and bromegrass remained a problem. The problems of high slippage and improper adjustment were resolved during these tests.

Development, implementation, maintenance and delivery of engineering computerized planning services continued. New services added during the year included programs for analysis of environmental control in livestock buildings, cost estimation of constructing pole frame buildings and retrieval of information related to energy conservation building products. The use of computerized services continued to increase with 1,436 projects being conducted utilizing computer models and programs. Engineering staff throughout the province made use of electronic mail which has proved useful in improving communications and has in turn improved service to the farming community. Through membership on the communications system task force, the branch was involved in the Alberta agricultural programmed access to communication (AAPAC).

Activities in seed and feed processing included the development of a modular seed plant design for co-op seed cleaning plants. Preliminary engineering drawings, cost estimates and specifications were prepared with the assistance of engineering consultants. Technical assistance was provided to farmers and co-ops to set up new plant facilities as well as to upgrade existing facilities. Expansion of activities related to on-farm grain and feed handling, storage and processing was initiated during the year to meet the demand from farmers for related information.

The Confinement Livestock Facilities Waste Management Code of Practice was revised to include the minimum distance separation method of siting. The branch had considerable involvement with land use planning issues at local and regional levels, owing to municipalities developing land use by-laws.

Higher input costs, specifically fuel and fertilizer, increased the interest in the utilization of animal manures as feed, fuel and fertilizer.

A project related to the development of a specialty grass seed harvester was successfully completed. It was designed, built and tested in cooperation with a forage association and the industry. A cooperative project related to apiculture buildings and equipment, and their utilization, was initiated in conjunction with the Alberta Beekeepers' Association, the Alberta Research Council and other branches in the department.

Branch staff contributed to various extension, research and education programs through continued representation on over 20 departmental, interdepartmental, intergovernmental and other committees.

Home & Community Design Branch

Energy matters related to family housing on farms was the primary focus of services provided by the home and community design branch. High utility costs in rural Alberta have resulted in widespread interest in energy conservation.

Forty-seven seminars and workshops were presented throughout Alberta. Attendance was very good. Retrofit seminars (renovating for energy efficiency) were the most popular as high interest and labor costs have made new housing prohibitively expensive.

A fact sheet entitled, *Movable Insulation*, (insulating treatments for glazed areas) was published. Display and demonstration materials were developed to show a variety of energy conservation products for insulation, weatherstripping, caulking, and glazing.

Two sets of wall section models exemplifying four alternative wall construction methods were developed.

A computerized inventory of conservation products was developed to assist builders and homeowners who have had difficulty in the past locating products recommended for low-energy homes.

The preliminary design service for new and remodelled homes was extended to 360 farm families. Approximately 80 per cent were concerned with energy conservation.

Many interior design workshops emphasising "do-it-yourself projects" were carried out. The Window Decor publication was revised.

IRRIGATION DIVISION

In 1961 there were 1,061,733 assessed acres on the rolls of the 13 irrigation districts in southern Alberta; however only 854,146 acres were actually irrigated.

ACTUAL IRRIGATED ACRES IN ALBERTA
(Total — All Districts)

1974	707,467
1975	735,000
1976	761,395
1977	849,686
1978	769,928
1979	888,813
1980	852,318
1981	854,146

A moratorium on the addition of new land remained in place in the St. Mary River, the Bow River, the Lethbridge Northern and the Eastern Irrigation Districts pending an increase in water supplies or enlargement of canal systems.

An agreement between the St. Mary River, the Raymond and the Taber Irrigation Districts was signed providing for an equitable sharing of costs for operation maintenance and right-of-way purchases for canal enlargement from Ridge Reservoir near Raymond to Horsefly Lake near Taber. Irrigation development limits were also agreed to by each of these districts: St. Mary River Irrigation District — 360,000 acres; Raymond Irrigation District — 45,000 acres; and Taber Irrigation District — 80,000 acres.

Work on phase 3 (framework planning and establishment of data base) of the South Saskatchewan River Basin Planning Program progressed with the following components being addressed: water quality criteria, water use efficiency, inventory of structures, irrigation water requirement, economic efficiency, and income distribution.

Following a review of river basin study outlines, recommendations were made to Alberta Environment on the North Saskatchewan, Athabasca and Peace River basin planning documents.

The mapping, land classification, and agronomy components of the Blood Reserve irrigation project feasibility study were completed with work underway on the engineering, environmental and social components; the economic and implementation components will follow. In this project 25,000 acres have irrigation potential.

The Sheerness-Deadfish-Berry Creek project north of the Red Deer River, designed to provide water to 35,000 irrigable acres, got underway with the river pumphouse and pipeline to Deadfish Creek nearing completion, and the Sheerness pipeline under construction.

As part of the general rehabilitation plan for all irrigation districts, scheduled for completion in 1984, aerial photographs producing 1:20,000 orthophoto mosaics were obtained and used as base maps. The districts paid for the photographs out of cost-sharing funds.

Farming for the Future research proposals prepared, submitted and approved were:

- Development of Optimum Subsurface Drainage Depth and Spacing Criteria for Medium to Fine Textured Soils Within Irrigated Alberta.
- Development of Computerized Classification Septum Utilizing Landsat Digital Data to Detect, Map & Monitor Saline Waterlogged Areas Under Irrigation.
- Economic and Relatively Impermeable and Durable Rigid Canal Lining for Southern Alberta Environment.
- Evaluation of Small Scale Wind Turbines for Pumping Water.
- Evaluation of Cut-Off Curtain for Seepage Control on Irrigation Canals in Southern Alberta.

Farm Irrigation Services Branch

Technical assistance to farmers continued at a high level during the past year. The number of acres of land forming was down by about 35 per cent from the previous five-year average. Although sprinkler system design and investigation was up slightly from the previous year, the number was down by approximately five per cent from the previous five-year average.

Development of private irrigation schemes outside existing irrigation districts continued as in previous years.

Subsurface drainage investigations decreased from the previous year. This was seen not as a decline in interest in drainage, but as increased utilization of the private sector.

FARM IRRIGATION SERVICES BRANCH 1976 — 1981
ANNUAL REPORT STATISTICAL SUMMARY COMPARISONS

	1976	1977	1978	1979	1980	1981
Acres of land levelled	6972	5988	3366	3785	4516	3175
Sprinkler systems investigated	403	427	418	573	405	420
Water licence feasibility reports	140	206	112	117	87	112
Irrigation scheduling cooperators	148	88	140	160	185	220
Subsurface drainage	—	—	—	—	39	29
Powerline relocation grant applications	—	—	—	—	19	18
Pump tests	—	—	—	—	—	45

Eighteen powerline relocation grants were processed for a total of $100,000. Last year 19 grants for a total of $50,000 were approved indicating a swing to more extensive and costly projects.

A coordinator was appointed to the irrigation scheduling program which encompassed 220 cooperators covering 63,700 acres. Emphasis was placed on education of farmer cooperators and program development including liaison with private industry.

An irrigation pump testing program was initiated in 1981-82 with 45 tests being completed. The response received from farmers indicated increasing concern about escalating energy costs.

Applied irrigation research activities were continued and modified as needs were identified. Studies of crop response to water, fertilizer and salt movement were continued. Two surface irrigation automation demonstration fields were continued. Two different ditch lining materials were installed for evaluation tests: aluminum and deci-fabric, a product imported from Belgium.

Agrometeorological data were collected and related to crop water requirements. The branch provided data for river basin studies.

The irrigation system inventory was 75 per cent completed.

Land Classification Branch

The technical resources branch was reorganized to become the land classification branch and the drainage branch effective 31 March 1981, to meet increased demand for both land drainage and land irrigability classification.

Land classification activities continued at a high level with requests exceeding the capability of the branch.

AREAS CLASSIFIED IN ACRES

	Level II (legal)	Level III (district improvement)
LC Branch	80,960*	322,150
Consultants	nil	354,720
TOTAL	80,960*	676,870

*506 individual quarters

LABORATORY MEASUREMENTS AND ANALYSIS ON SOIL SAMPLES

LAB	Chemical	Grain Size	Other	TOTAL
Irrigation Division	8,793	1,177	1,788	11,758
Alberta Environment	2,169	0	0	2,169
Private	7,731	609	3,388	11,728
TOTAL	18,693	1,786	5,176	25,655

Research continued with solonetzic soils, and laboratory studies resulted in an improved method of determining field capacity of soils.

Drainage Branch

The role of the drainage branch in the on-farm drainage program shifted to that of coordination, while the farm irrigation services branch assumed a greater portion of the investigation and design function.

Research in the areas of drainage, salinity identification and mapping continued, as did groundwater and irrigation return flow studies.

The branch responded only to the limited number of irrigation district requests for assistance in the area of drainage and reclamation that were unique, difficult, or required expertise unavailable from the private sector.

Extension and technology transfer by the branch included continued involvement in the Alberta Land Drainage Association, increased participation in presentation of lectures and short courses to farm groups in cooperation with the extension division, the preparation and presentation of lectures for the irrigation home study course, the initiation of a film on drainage in southern Alberta, and the preparation and presentation of a one semester credit course at the Lethbridge Community College.

Project Planning Branch

The project planning branch continued to provide engineering and planning services as well as support and advisory services to the irrigation districts and irrigation council.

Assistance to the districts was also continued in planning for system rehabilitation. Fifteen level 1 planning reports were completed, and system studies were continued for the Raymond and Western Irrigation Districts. Agreements for joint cooperative action on the preparation of general rehabilitation plans were concluded with 11 of the 13 districts. Field structure inventories were completed on the six small districts and were in progress in Lethbridge Northern, Eastern and Taber Irrigation Districts. Engineering planning and design assistance was provided to the Aetna, Leavitt, Magrath, Mountain View and Ross Creek Irrigation Divisions.

The evaluation and management section monitored 68 rehabilitation projects, reviewed 45 irrigation capital works reports for submission to irrigation council, provided guidance and assistance in preparation of contracts and specifications for 10 irrigation districts and the irrigation division, and assisted six irrigation districts with their right-of-way and appraisal problems.

Quarterly publication of the *Water Hauler's Bulletin* continued, advising the irrigation community on innovations and technology in irrigation management practices.

In the technical services section, major drafting activities over the past year included the preparation of level 2 and 3 land classification maps, 1:20,000 distribution system maps, and many assorted drawings for various reports, displays and ongoing division programs.

The survey unit provided surveys for irrigation capital works projects for the smaller irrigation districts, for the drainage branch, and the network for the aerial photo mapping program. In cooperation with Alberta Transportation, the unit assisted in evaluating contractors' work upon completion of survey projects for the mapping program.

In the aerial photo mapping program, four vertical ground control contracts were completed for the Lethbridge Northern Irrigation District (N.E. extension block), Crawling Valley, Bow River Irrigation District (East Block), and the Bow River Irrigation District (S.W. Block). Aerial triangulation contracts brought Crawling Valley and the Western Irrigation District to data bank stage. Photogrammetric manuscripts were prepared for the Taber Irrigation District, St. Mary River Irrigation District (East), and Crawling Valley. Contracts for contour mapping were completed for the Eastern Irrigation District Kitsim distribution block and the Blood Indian Reserve project. Other contour mapping projects underway included the Crawling Valley project, a cooperative project in the Kitsim area with Ducks Unlimited, and some canal profiling and cross sectioning in the Lethbridge Northern Irrigation District.

The research section completed the study and evaluation of seven different sealants for concrete lining in the spring of 1981 and published the results. Research activities included a literature review of types of concrete linings used throughout the world, pressure rating of fibreglass pipe, evaluation of reinforcement in concrete slipform lining, and the testing of fibreglass and polyethylene ditch linings.

A television inspection program of buried plastic pipelines was started to study and evaluate the pipeline conditions and backfill techniques being used.

IRRIGATION SECRETARIAT

The legislative authority for the irrigation council and the irrigation secretariat is The Irrigation Act, which states in part, "There shall be an Irrigation Council consisting of not less than seven members appointed during pleasure by the Lieutenant Governor in Council", and further "There shall be an Irrigation Secretariat consisting of one or more employees of the Department of Agriculture designated by the Minister. The Irrigation Secretariat is responsible to the Council and shall carry out its functions and duties under the direction and supervision of the Council."

The objective of the Irrigation Council was to effect a sound irrigation policy for the province, and to act as an advisory body to the Minister of Agriculture. Duties as outlined in The Irrigation Act included the approval of additions or deletions of land to be irrigated to the irrigation districts, the approval of money by-laws, district rates, budgets, and the administration and approval of any expenditure made by an irrigation district under the terms of a cost-sharing agreement entered into by the districts with the Province of Alberta to finance the rehabilitation of the districts' works.

In 1981-82, the Irrigation Council administered cost-sharing agreements with the 13 irrigation districts for a total expenditure of $21,680,000 from the Alberta Heritage Savings Trust Fund under the first year of a proposed five year rehabilitation program. These funds represented 86 per cent of the aggregate, the remaining 14 per cent being provided by the districts.

The purpose of the program was to rehabilitate and modernize irrigation distribution systems to assure water users of an efficient, adequate and reliable water supply for their crops, to allow for a limited increase of new irrigation as water supplies permit, and to reclaim land lost owing to seepage problems. This program ensured that irrigated areas would be able to increase production by having a reliable and efficiently delivered water supply, thus improving farm income and opportunities for family farm development in the irrigated areas and in providing a benefit overall to the agricultural economy of the province.

To accompany the improvement and modernization program, the Irrigation Council, in its role as the irrigation program committee of Farming for the Future, recommended eight irrigation orientated proposals for approval by the Agricultural Research Council. Capital funding for these projects in the amount of $388,000 to be drawn from the allocation for irrigation rehabilitation of the Alberta Heritage Savings Trust Fund was approved by the committee.

In 1981-82, under the direction of Irrigation Council, the irrigation districts undertook the preparation and development of a total rehabilitation program which will provide a detailed program and cost estimate for completely modernizing and rehabilitating the districts.

In 1981-82, Irrigation Council held 15 meetings including a meeting with the Minister of Agriculture and two special meetings with the Alberta Irrigation Projects Association. Approval was given for the addition of 9,000 acres to the irrigation district rolls. Sixty-six project reports submitted under the irrigation rehabilitation cost sharing agreement were approved for a total estimated construction value of $37,148,925.

A study comparing the economic advantages of pressure pipe systems over alternative irrigation systems was completed and reviewed by Irrigation Council. A pressure pipeline policy was established for irrigation districts under the program.

ECONOMIC AND MARKETING SERVICES

Alberta
AGRICULTURE

ECONOMIC AND MARKETING SERVICES

CANADA-ALBERTA SUBSIDIARY AGREEMENT ON NUTRITIVE PROCESSING ASSISTANCE

During 1981-82 Ottawa and Alberta signed phase 2 of the Nutritive Processing Agreement, which will continue to 31 March 1984 and will provide for $28 million funding to be shared equally by the province and the federal government.

The new agreement was designed

- to enhance opportunities for income and employment in the smaller centres and rural areas of Alberta
- to process products of nutritional value to animals and humans in Alberta
- to process products of plant or animal origin
- to encourage full-time commercial research focusing on nutritive products or processing activities.

The central feature of the program continued to be the offering of grants to eligible firms. New projects were eligible for grant assistance of up to 35 per cent of capital. Modernization and expansion projects could be assisted up to 20 per cent. Research operations could be assisted up to 20 per cent or to a maximum of $500,000 per project.

Grants totalling $4,310,498 were issued in 1981-82. Most of this funding came from phase 1 of the agreement. Projects which were offered grant assistance are described in the following table.

GRANT OFFERS MADE AND ESTIMATED CAPITAL TO BE INVESTED BY COMMODITY GROUP

Commodity Processed	No. of Projects	Grant Offers Made	Estimated Capital On Which Offers Were Made
Meat	11	$891,356	$4,315,945
Feed	7	707,674	2,529,328
Bakeries	11	124,810	669,497
Dairy	2	239,150	1,370,000
Vegetables	5	530,228	3,023,047
Canola	2	543,500	3,40,000
Alfalfa	5	421,212	2,428,228
Pharmaceuticals	1	24,887	82,956
Fertilizer	12	235,456	1,910,331
Miscellaneous	5	592,255	1,803,701
	61	$4,310,498	$21,473,033

MARKETING SERVICES DIVISION

The objective of the division was to encourage the growth of Alberta's commodity, feed, food and beverage industries. Over 1981-82 the division's five branches offered a variety of professional, technical and financial resources to this sector.

Increasing the quantity, quality and diversity of agricultural products processed within Alberta continued to be the role of the agricultural processing development branch.

The food marketing branch promoted Alberta processed products to Canadian consumers in cooperation with processors and producers' groups.

The commodity development branch again provided a link between individual producers, producers organizations, and the domestic marketplace for farm commodities and livestock. The branch provided technical and financial support to Alberta's farmers' markets.

The business analysis branch offered business consulting services to the agricultural industry and agribusiness, and provided financial assessments and audits for the Nutritive Processing Agreement and agricultural societies grants.

The food laboratory services branch continued to maximize the quality and safety of Alberta's food products through analytical, scientific and technical laboratory services.

Food Laboratory Services Branch

The food laboratory services branch carried out programs to improve the quality, safety and nutritional value of Alberta's food, food ingredients and agricultural production at the producer, processor, exporter and consumer levels. The branch, through its laboratories in Edmonton and Airdrie, conducted chemical, microbiological, biochemical, physical and organoleptical analyses on samples submitted by various government agencies, producers, processors, exporters, retailers and consumers.

The Edmonton laboratory continued monitoring foods, food ingredients and other agricultural commodities for the presence of pesticide, herbicide and aflatoxin residues. A total of 974 samples were analyzed for the presence of these compounds. In addition, the food laboratories in Edmonton and Airdrie examined 31,279 samples of dairy products, meats and honey for the presence of antibiotic residues and sulfa drugs.

From 1 April 1981 to 31 March 1982, the food laboratories analyzed 46,533 samples of food, food ingredients and other agricultural commodities, involving 164,015 tests. In addition, 936,474 analyses were performed on milk samples for payment purposes and for the dairy herd improvement program.

The following table indicates the number and type of samples received at the laboratories and the number of analyses performed during the 1981-82 fiscal year. The number of samples analyzed and the analyses performed during the previous 12-month period are indicated in brackets.

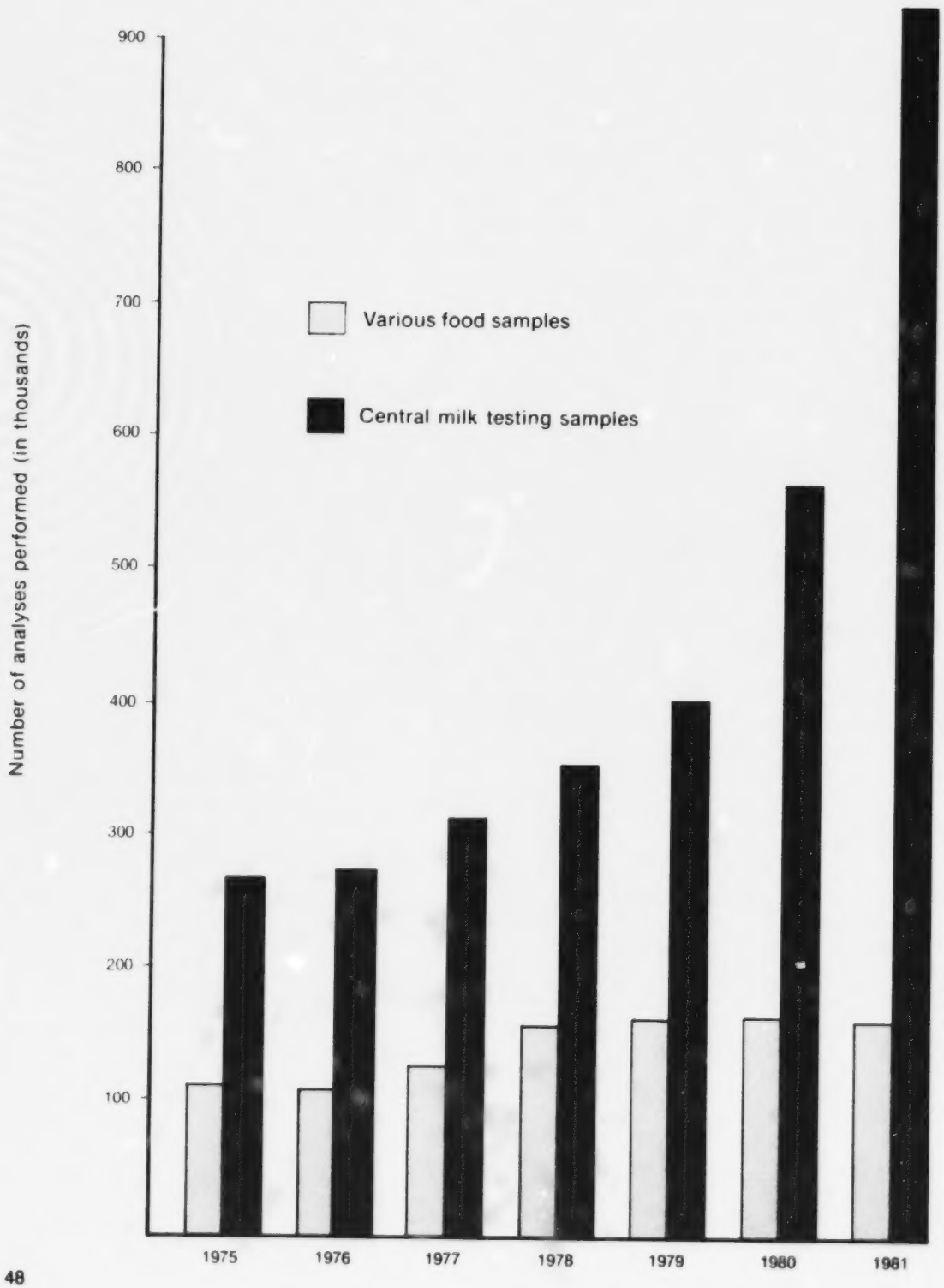
The graph illustrates the number of analyses performed by the food laboratory services branch during the past seven years.

SAMPLES ANALYZED AND ANALYSES PERFORMED
AT THE FOOD LABORATORIES IN
EDMONTON AND AIRDRIE
APRIL 1, 1981 to MARCH 31, 1982

(figures in brackets are for the previous 12-month period)

	No. of Samples Analyzed		No. of Analyses Performed	
Milk and Cream	37,692	(39,253)	133,741	(131,032)
Butter	268	(215)	1,026	(696)
Cheese and Cultured Products	2,590	(2,745)	9,914	(9,802)
Ice Cream and Frozen Desserts	783	(1,040)	1,949	(2,536)
Dry and Evaporated Milk	64	(9)	290	(37)
Processing Plant Survey	454	(919)	1,578	(3,589)
Honey	440	(593)	1,056	(1,335)
Washing and Sanitizing Agents	9	(1)	9	(1)
Water	157	(138)	321	(312)
Eggs and Egg Products	413	(272)	945	(638)
Meat and Meat Products	1,091	(1,278)	5,479	(6,624)
Vegetables	381	(356)	1,360	(1,255)
Fish and Wildlife	158	(102)	516	(368)
Cereal Products and Forage	265	(379)	527	(785)
Human Specimens	33	(15)	62	(16)
Soil	257	(272)	293	(316)
Research and Collaborative Studies	235	(379)	249	(448)
Miscellaneous Foods	1,243	(1,220)	4,700	(4,710)
Central Milk Testing	479,578	(414,431)	936,474	(561,657)
TOTALS	526,111	(463,607)	1,100,489	(726,157)

NUMBER OF ANALYSES PERFORMED
BY THE FOOD LABORATORY SERVICES BRANCH DURING THE PAST SEVEN YEARS



Food Marketing Branch

In 1981-82, the food marketing branch continued to support the development and expansion of the foodservice and retail markets for food items produced and processed in Alberta. Market research was a prime planning tool in providing appropriate marketing support.

Food marketing provided financial assistance and a high manpower commitment in the planning and coordination of the "Alberta Foodservice Perspective," a one-day conference sponsored by the Alberta Restaurant and Foodservices Association. This meeting addressed common concerns which were identified by members of the foodservice industry prior to the conference.

The first Alberta Restaurant Month featured Alberta products in menus, displays, and printed promotional material in many Alberta restaurants.

In a continued effort to reach the foodservice industry with information on Alberta food products, food marketing branch created *Focus on Foodservice*, a quarterly newsletter distributed to 500 foodservice operations.

The institutional foodservice study was completed in 1981 to provide information on the use of Alberta products in government-funded institutions. As follow-up, interviews were conducted with key foodservice distributors to ensure their awareness of Alberta food products, to obtain information to assist processors in meeting distribution requirements, and to disseminate the results of the study.

Food marketing assisted 13 Alberta food and beverage companies in the B.C. Food Show, the largest foodservice show in western Canada. Six Alberta companies participated in HostEx '81 in Toronto, the largest foodservice show in Canada. Major sales contracts resulted from participation in these two shows.

To further support the Alberta companies in their penetration of the foodservice market, *Alberta's Food Products...a directory for the foodservice industry* and an audio-visual presentation were updated. The Alberta Consumer Food Usage Profile, a major research project completed in October 1981, identified Alberta consumers' characteristics, behavior and beliefs as they relate to food product usage. This study provided data to assist Alberta companies in planning future market strategies.

The branch continued to expand its marketing assistance for canola oil products by distributing the results of a major research paper, *Survey of Edible Fats and Oils used by Prairie Consumers*, funded by Farming for the Future.

At the request of the Alberta Potato Commission, the branch assisted with a research project to determine attitudes, opinions and behavior of Alberta consumers toward potato usage. The results of this research will be used to assist the Alberta Potato Commission in determining future marketing and promotional programs.

The Alberta Food Processors Association (AFPA) continued to strengthen its effort to establish Alberta brands as Better Buy Alberta products. The department matched contributions made by member companies. The AFPA advertising had a significant impact in increasing consumer purchases of Alberta food products. Membership in AFPA increased by 13 per cent over the previous year.

In cooperation with AFPA, food marketing staff coordinated six major displays at shopping malls in Grande Prairie, Edmonton, Red Deer, Calgary and Medicine Hat. The staff also coordinated AFPA's participation in HomExpo '81, a consumer home show in Calgary.

Financial assistance and manpower were extended to the province's food industries including the Alberta Dairymen's Association, the Alberta Canola Growers Association, the Alberta Sheep and Wool Commission, the Alberta Cattle Commission, the Alberta Fresh Vegetable Marketing Board, the Alberta Potato Commission, the Alberta Broiler Growers' Marketing Board, the Alberta Egg and Fowl Marketing Board, the Alberta Pork Producers' Marketing Board, the Alberta Beekeepers Association and the Alberta Meat Processors Association. The food marketing branch assisted several food processing companies through the new out-of-province market development and promotional support program.

Last year saw an increased demand from individual companies for more one-to-one contact and assistance in developing their marketing strategies.

A display featuring Alberta brand products was created in response to increased public demand for information. This display reinforced the Alberta Food Processors Association marketing message to buy Alberta products. The brochure *Alberta Food Products* was revised to support this display.

Over 40,000 publications featuring Alberta food products were distributed. Over 18 hours of free radio and television time were used by food marketing staff to promote Alberta products.

Connection, the quarterly newsletter containing information about Alberta food products, was distributed to 16,000 Albertans.

Food marketing administered the department's Nutrition at School Program in Edmonton and Calgary. Please refer to the report on page 52.

Agricultural Processing Development Branch

The branch continued its close working relationship with the agricultural processing industry in meeting the objective of expanding the capabilities of this sector within the province.

Branch programs included project assessment and feasibility studies, research and technical assistance, financial incentives and work with other government bodies.

Many requests for assistance in conducting project assessment and feasibility were received from both existing and prospective processors, in spite of a cautious view of the economy. Major inquiries were for detailed information on wet corn milling, canola crushing and refining, pet food processing, gelatin manufacture, licorice making, sunflower seed cleaning and marketing, and prosciutto ham manufacture.

A significant amount of time was spent in reviewing the feasibility of converting grain to fuel. Results suggested that such a conversion would not be economical in the near future. Funding was provided for a commercial milling and baking evaluation of Alberta winter and utility wheats. The information gained was made available to Alberta millers, researchers and commodity organizations. A number of responses were made concerning opportunities for joint ventures between off-shore and Alberta processors.

Contributions were made to projects in which energy costs were a major component. These included an inquiry on single cell protein manufacture, industrial waste heat utilization in greenhouses, and peat moss and alfalfa dehydration.

The branch also reviewed position papers on the meat industry, sugar beet processing, long-term labor needs in food processing, and secondary processing opportunities in confectionery and cookie manufacture.

Research and processing assistance were provided to increase the use of Alberta corn; to extend shelf-life of fresh meats, poultry, fish and bakery products; and to improve meat and dairy by-product utilization. Many inquiries were received regarding regulations and standard processing procedures from small or new processors. Research was also conducted to assist firms with new product developments.

Design work was completed on the Food Processing Development Centre funded by the Alberta Heritage Savings Trust Fund. The centre is scheduled for completion in Leduc in the fall of 1983.

Grants were made on a cost-sharing basis to a number of firms to assist in their assessment of new technology, in their development of new products and processes and for their creation of new packaging systems. Other projects which have received support led to changes in the post-slaughter handling of beef, to improved clean-up of canola oil, to extended shelf-life for controlled-atmosphere pork and to the mechanization of beef jerky manufacture. Improvements in the packaging of pastry shells, sunflower seeds, dried mushrooms, processed meats and potato granules were also supported.

Commodity Development Branch

The main purpose of this branch was to assist producer organizations with promotion and market development. Some of the assistance was financial and some was in work performed. In general, it strengthened producer efforts to expand markets and marketing options, and to influence legislation affecting the industry.

The number of agricultural organizations receiving marketing assistance from the commodity development branch is as follows:*

1973-74	12
1974-75	42
1975-76	58
1976-77	51
1977-78	55
1978-79	53
1979-80	58
1980-81	65
1981-82	60

*Not including farmers' markets

The grain producer organizations, Palliser Wheat Growers, Western Barley Growers Association, Alberta Canola Growers and Flax Growers (Western Canada), found it necessary to make numerous representations to governments on policy matters. The commodity development branch assisted the Alberta Feed Grain Users Association which came into being during the year, to ensure more consideration be given to Alberta users of grain than in the past.

The purebred livestock associations again received assistance in their promotional activities. Work was done toward the establishment of a livestock trade fair in Alberta to better publicize the high quality of breeding stock produced in this province.

Cattle breeders received assistance to promote the sale of semen and improved breeding stock identified in testing programs. Commercial use of superior breeding stock was encouraged by assistance at livestock shows

and support to semen producers. One international congress was held in Alberta during the year.

Assistance was provided to swine breeders, goat breeders and rabbit producers for market development and to the Alberta Sheep and Wool Commission in their efforts to expand the sales of breeding stock and market lambs.

Attention was directed to the marketing of commercial cattle through promotion of preconditioned calves and feeder cattle sales and promotion of the cattle feeding industry. Arrangements were made for an industry group to visit Texas to review developments in electronic marketing of commercial beef cattle.

Support in market development and breed promotion was given to the horse breed associations to meet expanding interest in light and heavy horses. Two national horse shows were held in Alberta during the year.

Producer interest in nonregulated crops and products resulted in an upsurge in requests for market information and market development assistance.

In response to requests from producer organizations, ongoing assistance was provided to various commodity groups with a view to expanding markets and broadening the cropping base with special crops and their products.

The commodity development branch and the Alberta Dehy Association shared the costs of promoting alfalfa pellets and cubes to the livestock industry in Alberta and neighboring provinces. A seasonal increase in sales resulted.

The branch also shared in providing assistance to growers through the Alberta Potato Commission in evaluating new varieties, domestic seed-potato promotion, field days and industry meetings. General improvement in potato quality and increased production and sales assisted producers in maintaining farm income in the face of increasing production costs and a general downturn in the economy.

Cost-shared promotional assistance provided to greenhouse producers of flowers and potted plants through the Alberta chapter of Flowers Canada resulted in increased domestic demand for Alberta-grown products.

Assistance to producer members of the Landscape Alberta Nursery Trades Association for home and garden trade shows and conventions in Alberta resulted in an increased demand for domestic landscaping materials and allied services. Development of an industry source list of plant materials and industry brochures assisted nurserymen to expand production within the province.

Honey producers throughout Alberta were given promotional and organizational assistance through the Alberta Beekeepers' Association. Strengthened activities and programs of the association resulted in expanded membership, improved information services to honey producers, and increased sales of honey in domestic markets.

A new project to assess the production of and processing capabilities for sunflowers with a view to expanding cropping opportunities in Alberta began.

The farmers' market program continued to be favorably received by the public. The range of products sold expanded continually and the quality was excellent. There were 99 markets at the year end, a 16 per cent increase over 1980.

With the establishment of markets throughout the province, effort was made to increase the production of vegetables. Markets have met the objective of providing an outlet for local products.

Number of Farmers' Markets:

1974	17
1975	36
1976	46
1977	53
1978	65
1979	71
1980	85
1981	99

A wide range of displays was maintained and made available to commodity groups for use at trade fairs, agricultural shows, seminars and meetings.

The commodity development branch agreed to coordinate suggestions from department staff for use in Expo '86, a world fair to be held in Vancouver in 1986. It will focus on the importance of transportation, past, present and future, with the theme "Man in Motion."

Business Analysis Branch

Financial analysis of grant and loan guarantee requests under specific department programs, and business management assistance to agribusiness and other agricultural organizations remained the focus of branch activity.

During 1981-82, the branch continued to have the provincial responsibility for analysis and audit under the Canada-Alberta Subsidiary Agreement on Nutritive Processing Assistance (NPA). Branch staff inspected and audited 80 projects in rural Alberta, with $2,803,067 paid to 58 eligible firms representing initial or interim

payments, and $176,297 paid to 22 firms as final disbursements.

The branch reviewed applications for capital grants for the construction or improvement of facilities under the agricultural societies capital grant program and recommended the approval of 26 grants ($16,548,146) and four provincial loan guarantees ($18,045,000). Of these approvals, four grants totalling $15,444,800 and two loan guarantees for $17,700,000 involved new facilities for major exhibitions and Class A fairs. Capital cost audits on grant recipients began during the year and the branch completed 22 reviews of approved projects.

Branch staff helped to implement accounting procedures and controls for the Alberta Food Processors Association, gave support in budget preparation to a number of small processing facilities, and guided several processors in preparing internal financial statements. Branch members also assisted in assessing the feasibility of expansion or relocation projects for a number of firms and responded to inquiries regarding financial programs and general business information.

Business analysis branch members assisted in developing and refining the procedures used by the food marketing branch in its out-of-province market development grant program. In addition, the branch was involved in Alberta input into the evaluation and negotiation of a major federal-provincial financing package for a farm equipment manufacturing concern, and participated in discussions of support alternatives for other industries. Other efforts in this area included design and development of a training course in conjunction with farm business management branch, and a review of management development courses available to agribusiness managers through Alberta post-secondary educational institutions.

Nutrition at School Program

Nutrition at school was initiated by Alberta Agriculture in 1973 in response to the Nutrition Canada National Survey (Health and Welfare Canada), and a national report, One Child One Chance (National Council of Welfare), both of which stressed the need for nutrition education in the classroom.

The program continued to offer food samples together with nutrition education integrated into the regular school curriculum. The food samples were nutritionally as well as dentally acceptable and included Alberta food products where and when available. The food samples were not intended to supplement the child's diet but were used to expose the students to a variety of foods and to reinforce classroom discussion about nutrition and good eating habits.

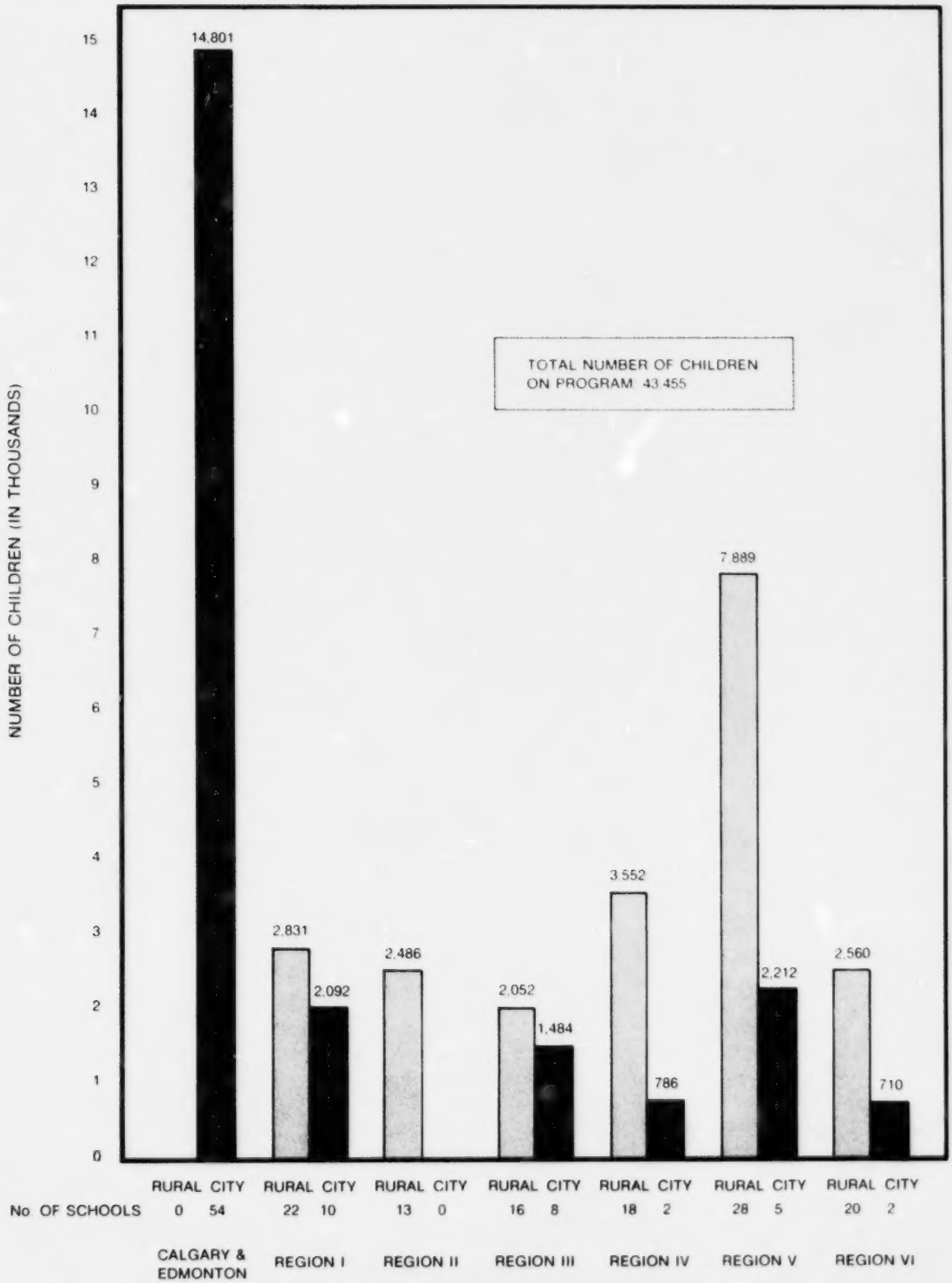
In its nine years of operation, the nutrition at school program has been implemented in 990 schools, representing approximately 72 per cent of all elementary schools in Alberta. The policy was to rotate the program to new schools each year in order to expose the maximum number of students to it. Each year more schools than can be accommodated request the program. The food marketing branch administered the program in Edmonton and Calgary, while the home economics branch implemented the program in the rest of the province. An eight-member core committee consisting of representatives from each branch plus one member of the planning and research secretariat provided program leadership and maintained provincial guidelines.

The nutrition at school program provided the link between agriculture, food and nutrition. The goals of nutrition at school were to increase Albertans' knowledge about their nutritional needs and the nutritive value of foods, to influence their attitudes towards nutrition and to encourage eating habits which foster health and wellbeing.

The effectiveness of the nutrition at school program has been demonstrated. It has heightened community awareness of agriculture, food and nutrition.

The number of schools and students reached in 1981-82 is shown in the table on page 53.

STATISTICAL SUMMARY
NUTRITION AT SCHOOL
1981 - 1982



ECONOMIC SERVICES DIVISION

The economic services division continued to offer applied agricultural economic services to the agricultural industry; in particular, to provide farmers with the information they need to make sound business, marketing, investment and production decisions.

During the past year the division's six branches emphasized meeting farmers' needs and concerns in the area of financial management.

Division staff endeavored to use every possible means of reaching farmers, including courses for agribusiness and financial and accounting firms to help them better understand the agricultural industry.

Research into basic farm production, marketing and resource use was continued throughout 1981-82. Emphasis was placed on research into problems encountered by farmers and how to assist them in pursuing opportunities for agricultural business development.

Market Analysis Branch

The objective of the market analysis branch was to provide farmers in particular and the agricultural sector in general with timely and pertinent market-related information on which to base production and marketing decisions. The branch continued to monitor and analyze agricultural commodity and product markets. The information gathered provided the branch with data with which to prepare market situation and outlook reports to interpret policy and development related to agricultural markets, to offer marketing extension courses and to provide market news and information. The branch's clients included farmers, agribusiness and government.

The branch prepared comprehensive reports on market prospects for several commodities. The information was made available to over 4,000 farmers, members of the legislature, and other interested persons through the *Market Situation and Outlook* reports. Information was further distributed through the branch's commodity publications such as *The Alberta Processed Alfalfa Market Newsletter*, and through publications of other branches such as *Sheep Foot Notes*. Specific situation and outlook reports were prepared at the request of both in-house and outside clients.

The branch continued its extension program to give farmers a more thorough understanding of the functioning of the market and to provide them with market information on which to base business decisions. A major market extension program was organized in conjunction with the Alberta Canola Growers Association. The branch worked closely with regional farm economists with the aim of getting the extension program to a larger audience than could be reached by branch staff alone. The branch staged two outlook conferences. "Taking Stock" in October provided farmers with market prospects for livestock, while "Accent '82" in March provided farmers with market outlook information on which to base their seeding decisions.

The branch also disseminated market news and short-term trend analysis through *The Weekly Livestock Market Review* and *The Weekly Market Grains and Oilseeds Review*, which were distributed to the media through the Alberta Communications Network (ACN) and mailed to about 9,000 producers. These were supplemented by daily market reports. *The Monthly Livestock Slaughter Summary* and *The Weekly Livestock and Grain Market* chart service were published to supplement the regular market news publications of the branch. An electronic data processing agricultural market data base, AGDATA, was maintained to facilitate internal research activities and for general public use.

Statistics Branch

The statistics branch provided statistical information services to Alberta's agricultural industry including farmers, farm organizations, agribusiness and government.

Staff members maintained a close liaison with Statistics Canada, Agriculture Canada, farm and business organizations and other government departments. The branch completed several surveys not available otherwise.

One of the main publications of the branch was the *Statistics Yearbook* released in August. This document contained a summary of agricultural data for the previous year and was updated with supplements throughout the year.

Regular crop reports were released every two weeks from May to October with a year-end summary published in December. A quarterly forage report supplemented the crop report.

The annual survey of beekeepers was completed, which estimated the number of beekeepers, number of

colonies, average yield and total production of honey in Alberta. The vegetable and potato surveys were also completed.

The quarterly cattle-on-feed survey provided summaries to producers who participated in the survey.

Two one-page fact sheets presenting major provincial agricultural statistics were issued.

The branch continued its involvement in price collection and reporting by releasing three reports: weekly average retail food prices for Edmonton and Calgary; weekly producer, wholesale and retail food prices; and monthly average farm input prices in Alberta.

The branch continued to document information on agricultural products after they leave the farm gate. Products studied were beef, pork and poultry.

The branch program to improve the amount of available data and information on agricultural imports coming into Alberta was continued.

Production Economics Branch

The production economics branch continued to provide producers, agribusiness and government agencies with information on farm inputs, yields, costs and returns for different farming enterprises in the province. Several research projects were undertaken by the branch to update and expand the information base on the economics of agricultural production.

The regional farm enterprise research project was continued in the Vermilion region where 52 producers provided detailed input output and cost return information for each enterprise and the total farm. Alberta Agriculture benefited by having more accurate data for research, extension, and for the design and evaluation of future policies and programs. A similar study involving 20 producers was completed in the Barrhead region.

The branch extended its regional farm enterprise research program to include beginning farmers. Production economics data on beginning farmers being scarce, a pilot survey was initiated in the Vermilion region to obtain cost and return data that describe the relative performance and success of beginning farmers.

A survey of the 1980 production costs and returns was undertaken for fresh and processing vegetables and potatoes in Alberta. The survey for the 1981 crop year was in progress at year end.

At the request of the Alberta Sugar Beet Growers Association, the branch documented sugar beet production costs and returns for the industry in 1981.

Field work was completed for the 1982 farm machinery cost study, providing farm machinery ownership and operating costs as of March 1982.

Field work began for the 1981 hog study, *The Economics of Hog Production in Alberta*.

The branch continued to monitor fluid milk costs and returns, and to prepare monthly reports for the Public Utilities Board, dairy producers and Alberta Agriculture.

A survey of the economics of beekeeping showed that in 1980 honey production per hive was 20 per cent below that of 1979.

The Economics of Production and Marketing of Greenhouse Crops in Alberta was published in June 1981. The report presented costs and returns for different greenhouse crops and identified problems and concerns affecting the future growth of the industry.

Two other studies were initiated in 1981. One was to document potato storage costs in Alberta and the other was to develop estimates of farm truck energy use in agriculture.

Twenty-six new consensus research data publication (CRDs) and 10 updated CRDs were published and distributed to producers and agribusiness. These economic reports show expected receipts and expenditures for crops, livestock and farming systems.

The branch continued to provide its clients with transportation costs, policy developments and freight rate changes for a wide variety of agricultural commodities transported by rail, truck and air. Changes in rail and truck freight rates and policy announcements affecting agricultural commodities were reported in the quarterly newsletter *Agriculture Transportation* published by the branch.

Resource Economics Branch

The resource economics branch assessed the problems and concerns of agriculture in relation to the development and use of water, land and energy resources. Branch programs focused on four areas: development analysis, impact analysis, information analysis and planning analysis. Staff working in the area of development analysis provided socioeconomic data for use in making public investment decisions. During 1981-82 projects concentrated on irrigation and water resources. A contract study was carried out in cooperation with the irrigation division to examine three systems for on-farm irrigation. The study yielded detailed estimates of the costs and benefits of the systems. Work began on compiling socioeconomic data

for water resources which will aid branch staff in responding to requests for interpretive information.

Impact analysis studies involved monitoring the socioeconomic effect of structural changes in Alberta's economy on the agricultural and food industry. Projects included gathering data on the infrastructure and institutional costs in developing northern land, economic viability and social stability of family farm development in the Peace region, the economic feasibility and conservation benefits of agricultural drainage in northern Alberta, and wellsite and powerline impact.

During the past year staff in planning analysis carried out applied research, collecting, assembling and providing interpretive information on water, land, and energy resource use. Topics included criteria for resource planning, guidelines in preparing resource planning input, and agricultural concerns in resource planning activities of other departments and agencies.

Information analysis was provided on request, making use of existing data. Topics included land value estimates and interpretations; land resource inventory, consisting of the provincial land use conversion inventory and special inventory; land value index for assessment; and public land use planning inputs.

The branch maintained data on rural real estate transactions in Alberta and analyzed the data for government agencies, companies and farm groups. The following table indicates the scope of this work.

TRANSACTIONS REVIEWED AND REQUESTS FOR INFORMATION
31 July 1971 to 31 December 1981

Years	Total Value Transferred (acres)	Total Value ($1,000)	Requests for Information (Approximate)
1971	2,114,025	142,314	100
1972	2,334,484	185,203	200
1973	3,218,233	295,168	350
1974	3,328,960	385,982	400
1975	3,146,075	455,646	400
1976	2,959,710	525,002	500
1977	2,699,518	575,641	500
1978	2,891,027	778,014	600
1979	2,929,154	948,522	700
1980	2,681,710	1,034,028	800
1981	2,718,437	1,206,866	900

During 1981-82 the branch offered advice to the Farmers' Advocate and land use activities division regarding their work on land use as it affected farmers. This was a change from previous years, when branch staff served on interdepartmental land use planning teams, committees and task forces.

Farm Business Management Branch

The farm business management branch continued to develop and adapt farm management technology for use by farm families in making business decisions. Particular emphasis was placed on the timely distribution of relevant decision-making techniques and information from the office in Olds.

The financial management section assisted farmers, field staff and agribusiness by interpreting legislation and providing information to aid managers in making sound decisions in credit management, tax management, labor management, business arrangements and estate planning.

Clients expressed continued interest in financial and tax management seminars particularly related to federal budget changes of November 12, 1981.

A number of short factsheets were prepared for producers and the agriculture press.

Section staff organized advanced farm estate planning seminars for accountants and lawyers in Edmonton, Red Deer and Medicine Hat.

Two five-day agricultural workshops were organized to help lenders better understand and serve their agricultural clients.

The farm planning section provided information to farmers and others regarding on-farm applications of micro-computer technology. As well as providing individual consultations, staff distributed the *Compufarm* monthly newsletter to 800 subscribers. Staff also monitored agricultural micro-computer programs and conducted at least one demonstration per month at seminars and meetings. Over 600 farm people attended a computer fair and trade seminar organized in cooperation with Olds College.

Seven thousand copies of the 1981 edition *Farm Machinery Costs as a Guide to Custom Rates* were printed and distributed.

The farm records and analysis section continued to encourage the use of farm records as an aid in decision making. The 1981 edition of the *Save-All Management Planning Calendar* was revised and 7,500 copies distributed.

The distribution of financial record books (*Income and Expenses Basic Records for Alberta Farmers* and *Prairie Provinces Farm Account Book*) remained at last year's level (9,172 in 1981-82, 9,175 in 1980-81, 5,411 in 1979-80).

The five-year revision of the *Farm Management Data Manual* was completed, printed, and mailed to over 1,300 subscribers.

The fifth *Managing Agricultural Technology for Profit* seminar was held in Banff with 440 enrolled.

Regional Economic & Business Services Branch

During 1981-82 the branch intensified, refined and developed its extension education and applied research in all aspects of farm business management from marketing to basic farm accounting.

The main clients were farm families, agribusiness, other government agencies and Alberta Agriculture staff. Eleven regional farm economists offered programs and services to match the needs of each of the six regions in the province. They also spearheaded the delivery of programs developed by the other branches of the division, and provided an assessment of the programs.

Branch staff offered information through individual consultation, seminars and workshops for producers, radio, television, newspapers, displays and through meeting of professional agrologists and economists.

Financial management topics covered during the past year included farm accounting, analysis, cash flow and capital budgeting, tax, estate planning, credit, investment strategies, business arrangements, buy-lease-rent options and machinery management.

Marketing extension programs were coordinated by three regional economists. They covered basic principles, analysis, marketing alternatives, forward contracting and hedging principles and strategies, outlook signals and transportation.

The branch worked in cooperation with commodity groups such as Western Barley Growers Association, Alberta Feed Grain Users Association and Alberta Canola Growers Association. Assistance to the latter group consisted of presentation of marketing seminars and workshops in six locations.

Applied research included:

- The publication of 35 enterprise cost and return and break-even studies (CRDs).
- Regional enterprise cost summaries.
- Development of a computerized enterprise cash flow analysis.
- Feasibility studies on farm and enterprise systems such as zero tillage, portable seed cleaning and high moisture barley.
- Water and land use resource studies in conjunction with other branches, divisions and departments.
- Marketing and transportation alternatives and market information data presentation.
- Studies of the cost of production for irrigated crops and irrigated systems. Staff standardized the format for irrigation system cost reporting.

In the system and market development area, branch staff assisted in the organization, documentation and follow-up required by the certified calf sale program, assisted commodity groups and gathered regional industry resource statistics for market research use.

Within the limits set by availability, main frame and micro-computers were used increasingly to more effectively deliver branch programs and counsel. Support was given to the provincial community college computers on the farm project and to other courses with a farm financial management direction.

AGRICULTURAL PRODUCTS MARKETING COUNCIL

The council was responsible for the administration of The Marketing of Agricultural Products Act. Pursuant to the act, the council facilitated the establishment and supervised the operation of producer marketing boards and commissions. There were seven marketing boards and three commissions operating under the act: Alberta Broiler Growers' Marketing Board, Alberta Cattle Commission, Alberta Egg and Fowl Marketing Board, Alberta Hatching Egg Marketing Board, Alberta Pork Producers' Marketing Board, Alberta Cattle Commission, Alberta Sheep and Wool Commission, Alberta Turkey Growers' Marketing Board, Alberta Fresh Vegetable Marketing Board, and Alberta Vegetable Growers' Marketing Board.

Alberta's marketing boards and commissions continued to strive for improvement in the economic well-being of producers.

Chicken production in Alberta continued to increase to meet demand. The Alberta Broiler Growers' Marketing Board, despite considerable pressure, decided not to join the Canadian Chicken Marketing Agency. This agency, which operates in the rest of Canada, sets provincial quota allocations for the member provinces.

The Alberta Cattle Commission again emphasized market development programs through activities in product promotion and improving market efficiency. The commission also entered into a joint agreement with Canada Safeway aimed at increasing the export of Alberta beef.

The production of eggs in Alberta continued to be restricted well below market requirements owing to the inability of the Alberta Egg and Fowl Marketing Board to obtain recognition of Alberta's market situation from the Canadian Egg Marketing Agency. Numerous discussions have taken place relating to the national quota allocation system.

The Alberta Hatching Egg Marketing Board was established as a result of a positive producer plebiscite. The purpose of this board was to negotiate minimum prices for producers with hatcheries.

In cooperation with Alberta Agriculture, the Alberta Pork Producers Marketing Board implemented a voluntary producer-funded market insurance program. The program was designed to stabilize returns to producers.

The Alberta Potato Commission presented a plan to the council that would see the commission changed to a marketing board for the purpose of setting minimum prices to be paid producers for table and seed potatoes. This proposal would be subject to approval of the producers by plebiscite.

The Alberta Sheep and Wool Commission continued to develop and conduct programs aimed at fulfilling Alberta's potential in sheep production.

The Alberta Turkey Growers' Marketing Board continued to function satisfactorily as a member of the Canadian Turkey Marketing Agency. Despite some concerns regarding quota levels, returns to turkey producers have been relatively good.

The activities of Alberta's two vegetable marketing boards were aimed at expanding this industry in Alberta.

Council continued to advise marketing boards and commissions under its supervision of their responsibility not only to their producers, but to other sectors of the industry and the public.

Other commodity groups which expressed interest in The Marketing of Agricultural Products Act during the year were the producers of sugar beets, soft white spring wheat and greenhouse vegetables.

ALBERTA GRAIN COMMISSION

The opening of a cash grain call market in Calgary which the commission has been promoting for the past several years, was postponed pending disposition of a proposal by the Winnipeg Commodity Exchange to establish a barley futures contract related to Calgary for pricing and delivery. Although the commission had for several years been pressing the Winnipeg Commodity Exchange to set up an Alberta price-determining mechanism, the consensus was that the barley futures contract would be preferable to straight cash grain trading.

In accordance with the responsibilities assigned to it, the commission continued its review of all aspects of the Alberta grain industry. It sponsored a seminar on the Canadian Wheat Board Act conducted by a lawyer from the constitutional law division of the Alberta Attorney General's department. Senior officials from several Alberta government departments participated.

Grain transportation and marketing problems associated with the statutory freight rates for moving grain continued to demand much attention.

The commission cooperated with the agricultural processing development branch in having milling and baking tests done on Alberta red winter wheat in various combinations with Alberta grown Glenlea wheat.

A brochure outlining the benefits to grain farmers of using producer cars was printed.

The transportation committee of the commission met with a representative of the federal government to study and make recommendations on the most appropriate method of allocating rail cars to move rapeseed to elevators at Vancouver. The same committee met with a representative of the federal ministry of transport to study and make recommendations on the future of the grain transportation authority.

The commission held liaison meetings with the Quebec Grain Board, the Pulse Growers Association, the Feed Grain User Council as well as all the grain commodity groups.

The commission hosted a delegation of 12 members of the Agricultural Committee of the Portland, Oregan, Chamber of Commerce, which visited several Alberta farms and grain processing plants.

The chairman of the commission was part of a group to visit the Soviet Union led by the Minister of

State for Economic Development and International Trade. As a result the commission hosted a Soviet technical mission concerned with canola production which spent a week in Alberta in September. The mission was led by the Deputy Minister of Agriculture of the Soviet Union.

The commission continued to publish a weekly newsletter dealing with the west coast grain traffic situation, as well as the weekly report on prices paid for feed grains in seven regions of the province.

The commission retained the services of a law firm to handle the claims and look after the welfare of the Alberta farmers involved when a small grain dealer filed for bankruptcy.

INTERNATIONAL MARKETING

Alberta
AGRICULTURE

INTERNATIONAL MARKETING

With only 8.9 per cent of Canada's population, Alberta produced approximately 20 per cent of the nation's food. As a result, most agricultural industries in Alberta are dependent on sales to other parts of Canada and other countries.

Alberta was a major supplier of all of Canada's leading agricultural export commodities. These included wheat and wheat flour, barley, canola (rapeseed), meats, whiskey, cattle and swine, animal feeds and hides and skins. As well, Alberta exported canola oil and meal, peat moss, semen, embryos, agricultural technology, forage seeds, honey and malt. Export trade in 1981 further developed for value-added products such as cookies, pasta, frozen dough products, crumpets and processed meats.

International marketing continued to be responsible for the development, coordination and implementation of services, support policies and programs designed to optimize the export of Alberta's agricultural commodities, processed foods and feed products, and technical services. The market-oriented approach taken gave priority to the following areas: Pacific North and Southwest U.S.A., Japan, Korea, United Kingdom, Germany, Mexico, USSR, Hungary.

International marketing's efforts emphasized the following commodities, established on a basis of domestic supply, strength of industry and market potential. They are presented in order of priority.

Livestock

- meats: beef & swine carcasses, high quality cuts, processed meats
- breeding stock: beef, swine, dairy
- technical services, including artificial insemination and embryo transplants
- consulting services as related to livestock, grains, feed mills, slaughter houses, feedlots, etc.
- by-products: hides, tallow, meats, bonemeal

Canola

- oil, both refined and crude
- meal
- seed

Grains and Feed Crops (value-added products from these crops)

- flour, pasta, crumpets, cookies, frozen dough and breakfast cereal
- processed vegetables including potatoes
- other processed foods, snack foods and honey

Specialty Crops

- forage seeds (clover, fescue, brome, alfalfa)
- seed potatoes
- beans, lentils
- alfalfa (dehydrated and cured, both cubes and pellets)

Other Products

- peat moss
- horses and horse meat
- flax, mustard flour and malt
- dairy products

Financial assistance was provided for a number of market development projects. Operating expenses and grants for the direct assistance of Alberta exporters were approved in the amounts of $341,638 and $409,918 respectively. Of these approvals, $195,943 and $324,894 were expended by the end of March 1981.

During 1981-82, international marketing participated in 55 incoming buying missions from 21 countries, 133 out-of-country sales missions to 34 countries, 16 international livestock and food shows in six countries and four shows in Alberta for international buyers.

United States

The U.S., being the largest and most important export market for Alberta agricultural products, when grains are excluded, took approximately 60 per cent of Alberta's exports. In 1981, $126 million of agricultural exports, principally live animals (slaughter cattle and breeding stock — 32 per cent of total), whiskey (22 per cent) and fresh or frozen meats (pork and beef 21 per cent) entered the U.S. from Alberta, an increase of 20 per cent over 1980. The largest portion of these exports went to adjacent markets in the Pacific Northwest, west coast and mid-west.

Efforts to increase beef exports to the U.S. focused on overcoming buyer uncertainty and unfamiliarity with the product. Tests were completed during the year on carcass and boxed beef which showed that Alberta beef had a five to six per cent higher yield to the counter

than U S. carcasses as a result of the quality and grading system. Progress was made in altering the federal grading regulations as they pertain to site of ribbing to better conform to the U S. and worldwide specifications, allowing greater access to these attractive markets. Alberta meat processors were successful in shipping lean, boneless cow meat used primarily in the hamburger trade. Attempts to achieve a larger share of the U S. beef quota for "high quality" Alberta beef continued.

The export of fresh and frozen pork into the U S. increased substantially over the year, and the U S. regained its position from Japan as the largest importer of Alberta pork products. Alberta was competitive with U S. mid-west producers in taking advantage of the large pork-deficient west coast markets.

During the year, several meat packers undertook to obtain, with international marketing's assistance, U S. label approval for a number of their processed meat products. Once these are obtained, packers will be able to vigorously pursue that segment of the large and lucrative U S. meat market.

Since the introduction of the U S. livestock show program, sales of purebred beef cattle have increased markedly. U S. buyers have become more aware of the superior genetic make-up of Alberta's beef cattle as a result of the participation at these shows of the department and purebred breeders representing all the major breeds. In 1981-82, international marketing sponsored an Alberta booth at Madison, Portland, Billings, Fresno, Kansas City, Louisville, Denver, Jackson and Houston.

The emergence of Canada Safeway's export development department, a project which international marketing encouraged, has given much needed assistance to many small and medium-sized food processors who would otherwise not have readily penetrated the U S. market. Exports of pasta products, bottled water, crumpets, processed vegetables and breakfast cereals have taken place through this medium. Preparations were well advanced in 1981-82 for U S. Safeway Canada Week promotions which should significantly increase the sales of these and other value-added grocery and meat products. Honey exports quadrupled since the export department was developed.

The department continued to support the efforts of Agriculture Canada in obtaining Generally Regarded as Safe (GRAS) status for canola oil, which would allow it to be exported to the U S.

Canola meal feeding trials on poultry, dairy and trout continued at Oregon State University, Washington State University and University of Washington. Canola meal exports to the U S. increased fourfold during this period.

The U S. Pacific Northwest (Washington and Oregon) was the major commercial potato business growth area in the 1970s. Along with this growth a substantial demand for quality seed stock emerged. Alberta growers working within international marketing's program became known as suppliers of high quality seed stock. During 1981-82, Alberta seed growers doubled their sales and supplied three per cent of this huge market. The acreage planted in seeds in 1981-82 increased from 600 acres to 1100 acres in response to this market potential.

Peat moss sales increased steadily as a result of joint industry and department export promotional activities.

Continued participation with the Western Association of State Departments of Agriculture (WASDA) and their Western United States Agricultural Trade Association (WUSATA) allowed Alberta to remain current on policy matters affecting agricultural development in the U S. and to have some input into U S. agricultural issues.

Through the initiative of the international marketing group, the Minister signed the Dr. J.G. O'Donoghue Agreement with the director of agriculture of the State of Alaska. Its purpose is to share information and undertake joint research work to encourage effective northern agricultural development. Commercial opportunities were identified in Alaska for the sale of breeding stock and livestock technology, forage and crop seeds, meats and other food products and specialized consulting services.

Pacific Rim & Southeast Asia

More information on Asian markets was collected during 1981-82 as a result of several missions to the region with exporters and officials. These activities emphasized beef, canola and dehydrated alfalfa in Japan, beef breeding stock, consulting services and forage seed in Korea, breeding swine in the Philippines, Malaysia and Singapore. International marketing played an active role in initiating sales of Alberta beef cattle to Korea as well as assisting Alberta agricultural and food suppliers to maintain and expand sales in existing markets.

Considerable emphasis was placed on exporting meat and livestock products to the area. Over 15,000 cattle were contracted for by the Koreans during the fiscal year, of which Alberta was able to supply over 60 per cent. Sales continued into the Hokkaido area of Japan. The associate director led a swine mission to Japan, Korea and Southeast Asia from which a sale of hogs was made to the Philippines and interest was renewed in Singapore, Malaysia and Japan.

Activity continued in the promotion of Alberta beef in the Pacific Rim, particularly in Japan. A successful beef tasting reception was held in Toyko for hotel chefs which led to increased interest in Alberta beef. This was confirmed at a beef offering at the Foodex Show.

Considerable effort went in assisting the canola industry to ship canola, canola oil and canola meal into the area. Major marketing initiatives were coordinated through membership in the canola council market development committee. The industry was assisted in maintaining the Japanese market, its largest customer. Shipments of canola oil were sent to the Indian sub-continent as well. Interest was developed in the use of canola meal in the Korean market.

International marketing hosted numerous incoming missions principally from Japan, Korea, China, Australia, and New Zealand. These concentrated on livestock and livestock products, forage seed, dehy alfalfa, peat moss and consulting services.

As a result of one particular mission, Alberta Agriculture became a partner in a co-op cattle demonstration pilot project at the National Livestock Experimental Station, the leading policy setting station in Korea. Five Alberta beef breeds including Hereford, Angus, Simmental, Limousin and Charolais, Lacombe swine and Kodiak rye seed were being tested for use in the Korean industry. In addition, the Gangweon cattle demonstration project continued. Visits were again made by a highly qualified Alberta specialist in an effort to promote the project and the beef cattle.

The potential market in the Pacific Rim for Alberta's processed food products was pursued. A request was made to the federal government to have a Canadian booth at the annual Foodex Show in Toyko. Progress was made to develop a cooperative B.C., Ontario, Alberta booth at Food Asia Singapore, and a Solo Food Show in Hong Kong. Several individual food processors were assisted with individual grants.

Latin America, Africa & Middle East

The marketing strategy and plan for Latin America, Africa and the Middle East was further refined, assigning priorities to countries, market activities and allocating financial and human resources based on market opportunities.

International marketing participated in the Guadalajara Livestock Show in Mexico, the PRADO Livestock Show in Uruguay and the Melex Food Show in Bahrain in the Middle East.

Incoming missions were received from Mexico, Uruguay, Argentina and Nigeria. These concentrated on swine breeding stock; beef and dairy breeding stock; bull semen; canola seed, oil and meal; agricultural consulting services and joint ventures.

International marketing initiated arrangements with the government owned National Rural Credit Bank in Mexico to assist them with their livestock purchases in Alberta, which could be substantial. Alberta was one of the first Canadian provinces to have made these arrangements.

Staff participated in ministerial missions to Argentina and Peru. Market opportunities were identified for malting barley, beef breeding stock, semen and agricultural consulting.

Alberta agricultural consultants were involved in the Caribbean, Africa and Latin America. International marketing provided assistance to firms in market penetration in the Caribbean, Zambia, Peru, Chile, Brazil, Nigeria and other markets.

Last year, a sales mission to Latin America concentrated on beans, lentils, mustard seed, and other specialty crops. Three companies participated in the mission and visited Mexico, Venezuela, Columbia, Trinidad and Peru. A number of sales were finalized.

Plans and discussions were finalized to start canola meal feeding trials in Mexico, and to undertake a canola meal seminar in Mexico.

Mexico continued to be the number one market for Alberta breeding swine. Bull semen sales and beef breeding stock sales continued to expand in Mexico, Chile, Argentina, Brazil and Uruguay. Good potential for canola seed, oil and meal markets remained to be fully developed in Mexico, Venezuela, Chile, Columbia and Peru. A potential meat and offal market was identified in Mexico, Venezuela, Peru, Chile, Caribbean and the Middle East. An excellent hide market was identified, with some resulting sales, in Mexico. Forage seed trade continued in Argentina, and could be further developed in Mexico. Market opportunities were identified for food products in the Caribbean, Mexico and the Middle East.

Europe

The European market included French-speaking North Africa, Egypt, Israel, Eastern and Western Europe and Scandinavia, a total of more than 35 major countries. Within this region, market priorities were identified as being the European Economic Community with emphasis on England, the Federal Republic of Germany, and Eastern Europe, namely the Soviet Union, Czechoslovakia and Hungary. Emphasis was placed on food products and consultant services available from Alberta, canola and meat products.

particularly the further processed products, received special attention.

The European Economic Community (EEC) remained a major importer of Alberta's agricultural and processed food exports. Switzerland, which is outside the EEC, remained an important customer for particular Alberta-produced agricultural and food commodities. In the Soviet Union, Czechoslovakia and Hungary, and in some other selected Eastern European countries, the promotion by international marketing concentrated on commodities and agriculture consulting.

In Europe good market opportunities existed for cereals, canola seed, mustard seed, flax seed, purebred beef and dairy cattle, semen, ovum, forage seeds, vegetables (e.g. frozen corn), honey, horsemeat, pork and beef offal, hides and a number of other items.

International marketing, along with Alberta producers and manufacturers, participated in the ANUGA Processed Food Show in Cologne, West Germany in 1981. This show alternates every other year with the SIAL show in Paris. These two shows were important in Alberta's program of introducing and selling processed food products in Europe. Some major missions furthering the sale of purebred Herefords for beef production were undertaken to the USSR, Czechoslovakia and Hungary in 1981. Hungary also received special attention regarding canola meal. That market was visited several times by industry people attempting to get the Hungarians to purchase large commercial quantities in 1982. Special activities were undertaken in several East and West European countries for the promotion of forage seeds including alfalfa and leaf-cutter bees. A swine mission visited Romania, Hungary, Czechoslovakia and the Federal Republic of Germany.

Further efforts were made to encourage the export of western leisure riding horses to Europe.

Livestock breeders were given assistance to participate in the Scottish and United Kingdom livestock shows. Particular emphasis was placed on increasing further sales of purebred animals, in addition to the development of a market in Europe for Alberta's high quality beef. The markets for western Europe were visited several times to take advantage of the new 10,000-tonne high quality beef quota available to the United States and Canada. While no Alberta beef went in under that quota during 1981-82, much effort was undertaken to ensure that the market was actively pursued and developed for the future. Other products such as Alberta honey were well received and accepted in Europe.

Alberta continued to work very closely with the European bureau of industry, trade and commerce in Ottawa, now part of External Affairs, as it did with the commodity offices of the food branch and the grain marketing office. Especially close relationships have been developed with Canada's foreign trade representatives in Canada's overseas offices and this close working relationship has helped the development of market opportunities in all regions of Europe.

Increased emphasis was put on incoming buyers' missions, many of which were received in Alberta during 1981-82. International marketing sought out people and companies in Europe which had a particular talent or technology required for the production of food items not currently being produced in Alberta or Western Canada.

PRODUCTION

Alberta
AGRICULTURE

PRODUCTION

ANIMAL INDUSTRY DIVISION

The animal industry division, consisting of five branches, responded to the needs of producers and agribusiness concerned with the production and marketing of meat producing animals and poultry.

The division activities included extending technical information to producers and agribusiness, solving production problems, liaising with other segments of government to improve service to producers, administering and updating acts and regulations in concert with industry requirements, as well as advising on and participating in pertinent applied research projects.

Beef Cattle and Sheep Branch

The cattle cycle remained stalled.

Calf producers and feedlot operators continued to face losses in 1981-82. Adverse economic conditions and continued competition from alternative sources of meat resulted in a poor demand which depressed beef prices. A pound of feedlot gain continued to cost very nearly as much as the slaughter price for A1, A2 steers. Interest charges on feeder cattle and operating costs continued to add about 10-12 cents to the cost of a pound of feedlot gain. As the year progressed, this cost-price squeeze was transferred from feedlot operators to calf producers.

Slaughter steer prices for 1981, at $74.16 per hundredweight, averaged close to the $74.59 of the previous year. The average price of feeder steers in 1981 fell to $76.55 per hundredweight from the $82.86 average of 1980. Fourth quarter feeder steer prices averaged $69.47 in 1981 compared with $82.66 in 1980 and $89.62 in 1979 for the same period. The number of heifers and cows slaughtered in the fourth quarter of 1981 was up by 9.5% from the same quarter of the previous year.

By 31 December 1981 beef cow numbers in Alberta were estimated at 1.44 million, 2% above the same date in 1980. The number of breeding heifers was reported at 220,000, an increase of 4.8% from the previous year. The estimate of total cattle and calves was 3.78 million head, up by 2.3% from 1980.

Once again, the weather played an important part in decisions made by Alberta beef producers. Warm, dry weather in early spring resulted in short pastures over much of the province. These conditions were relieved by adequate to abundant June and July rainfall in most of Alberta. Northeastern Alberta and parts of the Peace River district continued very dry for the third year. As a result, many pastures were overgrazed and hay crops were almost nonexistent. Many cattlemen disposed of whole herds rather than face a winter of purchasing feeds with depleted cash and credit.

With the first quarter of 1982, market outlooks began reporting fewer cattle on feed and the burdensome oversupply of pork had worked its way through the system. By the end of March, an outbreak of foot and mouth disease in Denmark placed further upward pressure on red meat prices.

The number of sheep and lambs in Alberta on 1 January 1982 was estimated at 118,000, an increase of 4,000 head or 4% since 1 January 1981. Sheep one year old and older totalled 82,000 head and lambs under one year were estimated at 36,000 head. These increases followed the general trend of the sheep population in Canada and Alberta since 1979.

SHEEP ON FARMS, 1 January 1982

	Total Sheep & Lambs			Sheep 1 year & Older			Lambs under 1 year		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
	thousand head								
Maritimes	37 5	41 7	41 9	29 7	32 0	32 0	7 8	9 7	9 9
Quebec	54 0	58 0	61 0	44 0	47 0	50 0	10 0	11 0	11 0
Ontario	155 0	162 0	165 0	107 0	117 0	119 0	48 0	45 0	46 0
East	246 5	261 7	267 9	180 7	196 0	201 0	65 8	65 7	66 9
Manitoba	14 3	13 4	15 4	10 5	10 0	11 5	3 8	3 4	3 9
Saskatchewan	60 0	65 0	65 0	41 0	44 0	44 0	19 0	21 0	21 0
Alberta	127 0	114 0	118 0	87 0	79 0	82 0	40 0	35 0	36 0
B C	33 0	34 0	33 0	24 0	24 0	24 0	9 0	10 0	9 0
West	234 3	226 4	231 4	162 5	157 0	161 5	71 8	69 4	69 9
Canada	480 8	488 1	499 3	343 2	353 0	362 5	137 6	135 1	136 8

SOURCE: Statistics Canada, Quarterly Report on Livestock Surveys

Alberta's slaughter of sheep and lambs at federally and provincially inspected plants in 1981 was 57,804 head, an increase of 47.4% over 1980. In 1981, Alberta was second to Ontario (75,954 head) in total sheep and lamb slaughtered. Imports of slaughter sheep and lambs from the United States into Alberta increased to 1,768 head.

The profitability of lamb production in 1981-82 declined owing to lower slaughter lamb prices and higher operating costs. Early in the year, lamb prices averaged $5-$7 per hundredweight below 1980 prices but by April 1981, prices were comparable to 1980 prices ($67-$74 cwt). The annual surge of lamb slaughter volumes in July pressured lamb prices downward at a rate close to the 1980 decline, and by 1 September prices were between $60 and $65 per hundredweight. The decline continued into October reaching a low of $53 per hundredweight ($10-$15 below the October 1980 price). Prices recovered slowly as slaughter volumes decreased. During the first quarter of 1982, slaughter lamb prices remained steady at $65 per hundredweight, $5-$10 per hundredweight below the previous year's price.

Operating costs increased in 1981-82. A consensus of several Alberta sheep producers estimated the operating cost of producing lambs to market weight in 1981 was $90 per lamb for early born (January) lambs and $70 per lamb for spring born (April) lambs. The operating loss per lamb was $25-$30 and $12-$17, respectively.

The number of dairy and beef cows bred by licensed inseminators during 1981-82 continued to decrease while there was a general increase in the number of herd owners inseminating their own cattle. The number of dairy cattle bred by artificial insemination continued to increase in Canada, while beef AI held steady or decreased in some provinces.

The AI industry continued to be healthy across Canada and in Alberta. The number of plus proven dairy sires available to dairymen reached an all time high. The bull studs in Alberta continued to be the main source of AI beef sires in Canada. The quality of Canadian AI sires and the value of the Canadian dollar were instrumental in the continuation of semen exports to many countries in the world. The demand for dairy and beef embryos on the domestic and international markets encouraged four Canadian AI centres to set up embryo transfer services for their customers.

While artificial insemination and embryo transfer have generally been associated with the cattle industry, in 1981-82 interest has increased in swine, goat, horse and sheep artificial insemination and embryo transfer.

DAIRY AND BEEF COWS BRED ARTIFICIALLY BY LICENSED INSEMINATORS IN ALBERTA

Year	Dairy Cows	Dairy Cows Bred To Dairy Bulls		No. of Beef Cows	Beef Cows Bred To Beef Bulls	
		No.	%		No.	%
1976	168,000	25,623	15.2	1,500,000	25,926	1.7
1977	155,000	18,557	12.0	1,555,000	10,758	0.7
1978	148,000	26,198	17.7	1,470,000	15,273	1.0
1979	140,000	27,804	19.9	1,380,000	15,516	1.1
1980	140,000	23,541	16.8	1,515,000	12,931	0.8
1981	140,000	18,995	13.6		8,920	

The number of samples submitted to the semen evaluation laboratory at Airdrie increased in 1981-82.

SEMEN SAMPLES RECEIVED AND EVALUATED AT THE SEMEN EVALUATION LAB, 1981-82

Species	Number of Samples	Number Substandard
Cattle	1,000	440
Horse	5	1
Fish	13	13
Sheep	5	3
Dog	2	2
Swine	54	23
Turkey	2	1
TOTAL	1,081	483

While the number of substandard samples represented a high percentage of the total samples submitted for evaluation, a large portion of the samples involved research semen samples, and samples from animals known or suspected of producing semen of inferior quality.

NUMBER AND SOURCE OF CATTLE SEMEN SAMPLES RECEIVED 1981-82 (1980-81)

Source of Semen	Number of Samples	Number Substandard
AI Studs	575 (189)	163 (56)
Inseminating Businesses	23 (8)	14 (4)
Private Breeders	28 (76)	16 (48)
Breed Associations	9 (21)	(0) (13)
Alberta Agriculture	365 (3)	247 (3)
TOTAL	1,000 (297)	440 (124)

The prices producers were willing to pay for breeding stock declined in 1981-82. Prices at the Ellerslie yearling bull sale averaged $1,397, down by approximately $100 from the previous year. The number of bulls sold was higher, however.

The number of herds enrolled in the beef record of performance program declined to 480 in 1981, a drop of 70 herds from 1980. The number of bulls entered into test station, however, increased to 2,000 head, up by 500 head from the year earlier.

The winter of 1980-81 was mild and the cattle with calves came through without serious incident. Feed supplies were ample and spring came early with the consequence that many cattle were on pasture by the beginning of May in most regions of Alberta. However the cattle market was not very encouraging and most feed managers entered the fall period with trepidation, with the result that many feedlots were empty or only partially filled.

The winter of 1981-82 was severely cold and long with many areas of Alberta experiencing record breaking low temperatures. As a result, feed supplies were underestimated in some cases, and the nutritional requirements were underestimated for cattle exposed to cold temperatures. As a consequence of the cold winter and a depressed economic climate, some cattle herds were abandoned and, in some cases, the producer was not aware of the serious emaciated condition of his herd. In other cases, especially where low quality feeds like straw were fed, several cases of rumen and abomasal impaction occurred after a sudden drop in temperature. In general, many cattle came through the winter in a poor to fair condition, depending on the energy supplements the producer was willing or able to provide.

On dairy farms where upright stave silos were used and only silage was fed, many digestive problems in cows occurred. Because of the cold winter of 1982

most of the silage was frozen in the silo and as a consequence was delivered from the silo in a finely chopped condition. Because the feed was cut very short, plus the failure to feed some form of forage, some cows became sick and died. Therefore, it was necessary for dairy producers with this problem to purchase long or baled hay to provide dairy cattle with a suitable level of long roughage. When this was done, the problem disappeared.

The difficulty of harvesting and storing good quality forage remained a major obstacle to optimum health and production of dairy cattle in 1981-82. More milk producers purchased complete dairy concentrates from feed manufacturers, but some discovered that concentrate feed cannot be substituted for excellent quality forage. This aspect of nutrition was accepted by more farmers last year. Evidence of this response was the shift from harvesting hay to silage production, earlier harvesting of forages and more interest in obtaining optimum forage production per hectare of land.

Nutritional problems in swine production were related to inadequate energy, protein, and macro and micro minerals in rations. Problems such as leg weakness, mulberry heart disease, reproduction difficulties and posterior paralysis in sows were reported by producers and regional specialists. Enquiries were received at the soil and feed testing laboratory from both producers and agribusiness about the amino acid composition of grains, the level and quality of protein supplements to include in grain rations containing various levels of protein, and the inclusion of certain vitamins and minerals in rations and whether they would optimize certain reproduction traits such as conception rate and litter size.

Some nutritional problems which limited production in the poultry industry were leg weakness, egg shell quality, flip-over syndrome and electrolyte deficiencies.

In 1981 there was an increased interest by Alberta producers and agribusiness personnel in feeding residue feedstuffs to livestock. Some feedstuffs were straw, wood chips, trees, manure and fish offal.

Concern over sour gas emissions causing adverse reactions in livestock increased. Questions regarding trace mineral nutritional adequacy and toxicity increased as well.

There was an increased interest from producers and the public in the nutrition of rabbits, foxes, goats, sheep and wild ruminants. As outlined in the industry overview of the beef cattle and sheep industries, a combination of factors resulted in continued and increasing pressure on the net income of both beef cattle and sheep producers. In response to this situation, the province introduced a one time beef cattle and sheep support program. It was estimated that this program would place about $133 million in the hands of Alberta producers.

In the herd maintenance category of the beef program, cow-calf producers received $50 per head on 90% of their bred beef cows and bred heifer inventory as of 1 September 1981. The second category applied to backgrounder cattle. Feeder cattle and calves purchased or owned by the producer and sold as feeder cattle between 1 December 1980 and 30 November 1981 qualified as backgrounder animals. Producers received $4 per hundred pounds of live sale weight for backgrounder cattle sold during this period. Slaughter cattle represented the final category. Producers received a payment of $4 per hundred pounds of live sale weight for slaughter cattle grading A, B or C that were sold between 1 December 1980 and 30 November 1981.

Sheep producers had the option of claiming on one of the following programs. They received a payment of $10 per head on all lambs sold for slaughter between 1 December 1980 and 30 November 1981. Alternatively, they could have received a payment of $10 per animal on 90% of the ewes and bred replacement ewe lambs on inventory as of 30 November 1981 and a payment of $4 per hundred pounds of live sale weight on all slaughter and feeder lambs sold during the period between 1 December 1980 and 30 November 1981.

In addition $800,000 was granted to the Alberta Cattle Commission to be used in the initial part of a three-year program to support beef product promotion.

The record of performance (ROP) program was developed for both commercial and purebred producers to assist them in maximizing economic returns from their herd or flock by having a testing program which would facilitate the identification and selection of breeding animals which express superior performance for economically important and heritable traits.

Four hundred and eighty herds completed weaning reports in 1981-82 fiscal year. This represents approximately 25,400 cows tested. Seventy fewer herds were enrolled this year compared with last. Offsetting this drop was the introduction of the Canadian Hereford Association total herd evaluation program which had 18,000 cows enrolled, 8,000 of which were Alberta cattle.

Year	Herds Enrolled
1976	884
1977	736
1978	687
1979	632
1980	559 (revised)
1981	480

Technicians were hired to supervise weighing of cattle for the home performance test programs. All calves were weighed at weaning and about one-half of these were weighed again at one year of age. Twenty-six thousand weights were supervised at a total cost of $40,000. Twenty counties participated in this program; extension personnel supervised the weighing in the other counties.

Twenty groups operated bull test stations this year. They tested 2,000 bulls for growth rate on 140-day feeding trials from weaning to approximately one year of age. All stations were provided with some weight supervision by branch staff. Fifteen test groups took advantage of the branch's offer to publish and distribute results to the ROP mailing list.

The branch operated the Ellerslie test station again with 150 bulls starting test. Of these, 50 were fed in stalls containing "Pin Pointer" feed consumption recording machines where individual feed consumption was recorded and stored by machine for each bull. Feed conversion was calculated for each bull.

An auction sale was held at the conclusion of the test and 47 bulls of 51 offered sold for an average price of $1,395.

The sheep ROP home test enabled producers to evaluate wether, ram and ewe lamb rates of body weight gains from birth to 50 and 100 days of age. Fifty and 100 day lamb weights were adjusted for age of ewe, sex and type of birth, and rearing (single, twin, triplet, etc.) to enable the making of comparisons between lambs.

The number of breeders enrolled on the program increased dramatically from 36 in 1980 to 49 in 1981. Complex input forms and slow turn around time continued to restrain producer enthusiasm for the program. Although the total number of crossbred sheep on home test increased in 1981, the general trend indicated commercial producers dropped the program because of the large amount of time required to weigh and record data. Over the past five years purebred enrolments have increased. Part of this increase may be due to mandatory ROP enrolment for entry to class A shows. Most purebred producers, however, have accepted the home test program as a useful genetic tool in flock improvement.

A SUMMARY OF ENROLMENT IN THE SHEEP ROP PROGRAM BY BREED SINCE 1977

BREED	1977	1978	1979	1980	1981
Suffolk	1,565	870	1,821	1,271	1,913
Hampshire	287	23	138	369	229
Lincoln	—	—	—	7	—
N.C. Cheviot	117	59	148	187	327
Rambouillet	187	4	68	162	167
Columbia	23	24	77	89	98
Dorset	81	54	127	177	327
Leicester	—	—	—	7	—
Corriedale	39	28	3	—	19
Scottish Blackface	10	5	—	13	20
Finnish Landrace	22	—	81	59	247
Other Purebreds	—	—	—	30	39
Crossbreds	1,659	121	785	592	995
TOTAL	3,990	1,188	3,248	2,963	4,381

The seventh consecutive year of the sheep ROP test station was completed in 1981. The test was conducted at the new permanent facility on Olds College campus. Sheep were entered on test beginning the last week of February and at two week intervals on three more occasions. Twenty-three breeders entered 102 sheep at the station. Lambs were grouped according to entry date, sex and breed and tested for weight gains for 60 days.

Animals which indexed above 100 for average daily gain and which met the requirements of a culling committee were sold at the test station sale at the college on July 4.

SUMMARY OF THE 1981 TEST AND SALE RESULTS

Breed	Number Tested	ADG (kg day)	Number Sold	Average Price	High Price
Suffolk (rams)	70	0.48	30	$389	$775
Suffolk (ewes)	5	0.41	2	$400	$425
Hampshire (rams)	16	0.42	6	$296	$400
Hampshire (ewes)	2	0.39	0	—	—
Dorset (rams)	8	0.33	1	$450	$450
Columbia (rams)	1	0.48	1	$350	$350

SUMMARY OF TEST STATION RESULTS SINCE 1977

	1977	1978	1979	1980	1981
Breeders on program	14	16	17	17	23
Sheep tested	165	155	123	101	102
ADG (Suffolk rams)	0.36 kg	0.42 kg	0.49 kg	0.48 kg	0.48 kg
Head sold	53	57	52	44	40
Average price (rams)	$244	$275	$331	$323	$375
Top price	$500	$1050	$675	$520	$775

Three testing agencies operated progeny testing programs in Alberta last year. Of these, two completed programs and applied for grants for 21 bulls at $750 each, totalling $15,750 in grants.

The Young Sire Proving Program provided grants of one-half the cost up to $750 for each bull being tested by a suitable progeny testing program.

The warble control program was designed to reduce the incidence of grub infestation in cattle as grub-free slaughter cattle have higher body weight gains and carcass values. The warble fly causes gadding, a sudden escape-like running action, which can cause injury and weight loss to cattle. The program benefits farmers by improving farm incomes. In 1981 increased attention was placed on farm inspection of herds selling infested animals, with emphasis in a fall treatment program. The two major warble monitoring systems at the packing plants and auction markets were carried out in order to assist agricultural service boards in identifying sources of infested herds in their own municipalities.

A central computerized data recording system to record and collect information from the warble monitoring system was initiated. This assisted the agricultural fieldmen in comparing previous infestation records and planning on-farm visits for enforcement and extension of the warble control program.

The department continued to support local government with grants to cover 60 per cent of their costs connected with warble control.

Warble Control Program Costs: assistance to local government and market inspections.

1981 — $140,143
1980 — $131,932
1979 — $120,259
1978 — $102,505
1977 — $ 83,257

The department also reinforced the warble control programs of local governments with a radio and print media advertising campaign across the province.

The fair assistance program helped 251 farmers exhibit their livestock at major out-of-province exhibitions. The objective was to expand domestic and foreign markets for Alberta breeding stock.

The program was expanded to include grants for sheep breeders attending one national sheep show in the U.S. each year, although no claims were received for assistance to attend U.S. national sheep shows.

LIVESTOCK FAIR ASSISTANCE PROGRAM
(number of exhibitors shown in brackets)

Fair	1981-82	1980-81	1979-80	1978-79
Pacific National Exhibition, Vancouver	36,078 (63)	29,142 (61)	27,142 (51)	26,776 (39)
Toronto Royal Agricultural Winter Fair	9,780 (16)	9,300 (16)	8,600 (13)	3,475 (11)
Canadian Western Agribition, Regina	51,845 (132)	50,085 (127)	25,219 (95)	20,952 (108)
National Western Stock Show, Denver	22,200 (32)	17,200 (15)	11,300 (10)	2,100 (5)
Sheep Classic, Brandon	3,685 (8)			
TOTAL	123,588 (251)	105,727 (219)	72,261 (169)	53,303 (163)

Local agricultural service boards were given grants totalling $34,114 to cover 60 per cent of the costs of programs to promote improved livestock production in their districts. These programs took the form of demonstrations of new production practices or the purchase of livestock equipment for rental or loan to local producers.

Grants in the four years previous to 1981 were $26,476, $19,753, $15,603, and $5,739 respectively.

During the 1981-82 fiscal year 9,693 samples were processed by the feed testing and rations advisory service, an increase of 1,065 over the previous year. Out of this total, 33% were regular samples (requested by producers), 22% demonstration (requested by government personnel as an aid in diagnosing field problems or as a demonstration of feed testing services) and 45% research samples.

COMPARISON BETWEEN THE NUMBER OF SAMPLES RECEIVED IN 1981 AND THE AVERAGE NUMBER RECEIVED IN 1971 TO 1981

	Sample Classification			
Period	Regular	Demonstration	Research	Total
1981	3,219	2,137	4,337	9,693
Average - 1971-1981 (calendar years)	4,645	1,429	2,494	8,600

Although fewer samples were submitted by producers compared with former years, producers were using private feed testing services more than in the past with the net result that the total number of feed samples analysed in the province increased rather than decreased. The number of samples classified as research has doubled since 1980, and in this fiscal year, nearly 45 per cent of the total samples submitted for analysis were research submissions.

Among the regular samples (3,219 total) received, 1,061 were classed as grain, 1,685 roughages and 473 silages.

Regular roughage and silage analyses consisted of moisture, crude protein, calcium, phosphorus, acid detergent fibre, nitrates and in the case of silages, pH. Grain samples received a regular analysis for moisture, crude protein, calcium and phosphorus. A bushel weight was also determined on whole grains.

Special analyses were availabe to producers upon request. These included carotene, selenium, prussic acid, fat, salt, ash, copper, magnesium, zinc, manganese, iron, potassium, sulphur and molybdenum.

There was a general increase in the number of chemical analyses done in the last four years, but a large increase in the number of individual elements tested for in the last two years (i.e. 12,573 samples analysed for trace minerals in 1981-82 fiscal year). Requests for element analyses in practically all of the macro and micro elements in all sample submission categories (regular, demonstration, and research)

increased by up to 12 per cent. The number of analyses and elements analysed for was expanded.

General recommendations and comments were included with each feed report, giving the chemical analyses for the feeds submitted. In 1981-82, a total of 2,910 feed reports were evaluated, an increase of 158 over the previous year.

Each report or individual request frequently entailed detailed ration recommendations for more than one type of animal and level of production. As a result, several rations or ration alternatives were prepared for each request.

In 1981, the total number of requests for ration recommendations was 363, signficantly down from the figure of 547 for the last calendar year. The decrease in numbers was due largely to the drop in number of requests received between January to March of 1982, as compared with the previous year. The number of requests received during the 1981-82 fiscal year was comparable to other years. The increase over the past two years in requests for ration information was generated by the cattle nutrition home study course and the pork production home study course, which were not run in 1981-82.

The AI data program introduced in April 1980 continued with a grant of $1 being paid for each insemination reported by the insemination businesses in the province. With the computerization of this program, more accurate statistics have been accumulated on the insemination business. Under this program $53,396 was paid to 27 inseminating businesses over the past year. One thousand three hundred and seventeen (1,317) AI sires bred 27,915 beef and dairy cows in 1981-82 compared with 36,472 in 1980-81. A wide selection of bulls was used in the AI industry. The Holstein breed accounted for a very high percentage of the dairy sire services while the Hereford, Simmental and Aberdeen Angus provided most of the beef sire inseminations.

Number of Licences and Permits Issued in 1982 Under The Artificial Insemination Act

Semen Producing Businesses — 5
Inseminating Businesses — 48
Technician Licences — 114
Technician Training Permit — 1
Specific Herd Permits — 3

The number of inseminating businesses and technician licences were down 6 and 17 respectively from the previous year, confirming the trend of the past number of years. Only 21 new technicians were licensed during the year, indicating a lack of demand for technician services while approximately 200 cattlemen attended 18 AI short courses held during the year to learn to inseminate their own herds. Semen producing businesses reported a strong demand for semen and inseminating supplies during the spring of 1982, indicating an increased interest in owners using AI on their own herds.

In 1981, the ram purchase program continued with the intention of improving the genetic quality and breeding condition of rams on community pasture.

To be eligible, an association must function specifically for the purpose of organizing and administering communal ranges or pastures for sheep and must have a membership of not less than 10 patrons. A qualifying association was eligible for assistance to a maximum of one ram per 25 ewes for three consecutive years. The grant was calculated at one-half the purchase price of the rams to a maximum of $7,500 per year.

One association applied for assistance in 1981 and received $1,325 towards the purchase of new rams.

Grants issued under the Ram Purchase Program

1979-80 — $6,135
1980-81 — $1,550
1981-82 — $1,325

The special project demonstrating the effects of growth implants was continued in 1981. In 1980 and 1981 a total of 1,941 cattle from 40 different herds were used to evaluate the effect of Ralgro and Synovex growth implants in heifer and steer calves and in yearling feeder cattle.

Heifer calves implanted with Ralgro gained 4.1% or about 10 pounds more than untreated calves. Ralgro implanted steer calves gained 5.4% or about 14 pounds more than untreated controls. At 1981 calf prices, these additional gains would represent an extra $6.50 to $10 per implanted calf at a cost of under $1.50 per calf for the implants.

Yearling feeder cattle implanted with Ralgro and Synovex gained from 16.8% to 20.5% or 21 to 37 pounds more than untreated pasture mates. At 1981 prices, this would represent an extra return of about $14 to $25 per implanted animal at a cost of less than $1.50 each.

In 1981-82, the special projects section cooperated with the nutrition section, the beef cattle and sheep

branch and the grazing reserves section of Alberta Energy and Natural Resources to conduct a trial at the Thorhild grazing reserve to measure the effect of trace mineral supplements and growth implants on yearling steers on pasture. The effects of growth implants were included in growth implant studies already reported. Steers on the trace mineral salt fortified with copper, zinc and manganese gained 17% more or an additional 37 pounds in the 113 days on pasture. At 1981 prices, this would have been an extra $25 return per steer for the extra cost of about $1.50. Statistical analysis showed these effects to be additional to the effects of growth implants. Steers receiving both trace minerals and implants returned an additional $49 per animal. The additional cost was about $4.50 for both the trace mineral and the two implants per steer used in this trial.

The reproduction section of the branch was involved in three research projects during the year.

1. A project involving 30 beef bulls was established at the Ellerslie beef test station to evaluate the effect of Fenvalerate eartags on male reproduction. While the project has not been completed, there appears to be no effect on male reproduction.
2. A project initiated at the University of Alberta Ellerslie ranch compared the semen quality of bulls collected by an artificial vagina with that collected by electro-ejaculators.
3. In cooperation with the University of Alberta, bull fertility, breeding soundness and breeding activity were studied at the Kinsella university herd.

Assistance was given to the pork industry branch in conducting a field trial for the evaluation of frozen boar semen.

An estrus synchronization project in sheep was begun using Repromap intravaginal sponges containing 60 mg of medroxyprogesterone acetate. Four hundred ewes on five different farms were treated with sponge placement for 12 days and an injection of 500 IU of PMSG at sponge removal. The ewes were bred 48 hours after sponge removal.

Other nutrition research and demonstration projects were as follows:

- Continued activity with the University of Alberta in the feed evaluation program where various Alberta feedstuffs were evaluated by *in vivo* techniques.
- Continued research on the cracked hoof syndrome of cattle in 16 Alberta herds.
- Continued evaluation of macro and micro mineral content of forage crops according to variety and maturity at harvest.
- Continued evaluation of feeding high moisture barley and the effect of type of silage storage system on performance in growing beef cattle.
- Continued evaluation of the feeding value of damaged cereal grains.
- Evaluation of the toxic levels and effects of copper on growing Holstein calves.
- Evaluation of the copper requirements of growing goats.
- In cooperation with Alberta Environmental Centre, studied the effects of acid emissions on livestock in the Rocky Mountain region.
- In a project approved and funded by Farming for the Future, trace mineral content of feeds and soils on farms where a health and production problem in livestock was thought to exist were compared with a neighboring farm where feeds and soils were thought to be no problem.
- In cooperation with regional staff, a study of the feasibility of increasing the drying rate of cut hay before baling using potassium carbonate (K-Hay project).

Branch staff were involved in extension activities. producer meetings, personal correspondence, mass media, personal contact and on-farm demonstrations were all used to distribute livestock information to producers, other government agencies, industry and the general public.

The branch published five newsletters on a regular basis in 1981-82. These were *Alberta Beef, Stock Chat, A.I. Newsletter, Sheep Notes and News* and *Sheep Footnotes*. Articles on livestock management and marketing were featured.

Three manuals were distributed by the branch. The *Cow-Calf Manual*, the *Sheepman's Manual* and *Wool and Sheepskins*. The *Cow-Calf Manual* was revised in 1981.

A reproduction management record system was developed for dairy cattle and swine producers, consisting of a daily pocket diary and a loose-leaf type of permanent record sheet.

The branch organized and participated in numerous workshops and seminars on cattle management, ration formulation, trace mineral nutrition, cow-calf

management, sheep management, dairy cattle breeding, nutrition and reproduction, and artificial insemination.

A major provincial sheep symposium was held at the Banff Centre in November 1981. More than 250 participants from Alberta, British Columbia, Saskatchewan, Manitoba, Ontario and the United States attended lectures and discussions for two days. The theme of the symposium, "Strategies for Survival", reflected concern in the industry over high input costs and decreased market returns. Marketing, nutrition and management were discussed by the 17 invited speakers.

A special committee charged with developing a formula to define acceptable minimum distances between residences and intensive livestock operations produced a revised *Code of Practice for Confinement Livestock Facilities Waste Management*.

At the request of the grazing division of Alberta Energy and Natural Resources, the branch, in cooperation with the animal health division, developed and implemented a footrot control program for sheep entering the Medicine Lake community pasture.

The procedure involved foot trimming, foot bathing with copper sulphate or formalin, and culling of chronically infected sheep. Each pasture patron was visited at least once and control procedures were initiated. The program provided an excellent opportunity to teach patrons the proper technique of footrot control and hoof care techniques.

Horse Industry Branch

During 1981-82, the horse breeding industry in Alberta continued to expand in response to the local demand for quality racing and show horses. Prices for quality horses increased despite the depressed economic situation, however, prices for average or below average horses fell. Because of provincial government assistance, and an increase in betting, interest in breeding thoroughbreds and standardbreds was particularly high. Horse meat production in Alberta exceeded $20 million as export demand continued to exceed supply.

The horse industry branch provided extension services and programs to Alberta horse breeders and the public in general. In cooperation with breed associations, universities, colleges, local clubs and extension staff, the branch provided technical and financial support for 45 clinics on such topics as horse nutrition, hoof care, reproduction, health, management, training and showmanship. The staff provided technical assistance to horse breeders and breed associations through farm and office consultations, bulletins, telephone calls, correspondence and articles in breed journals and horse magazines. In the past year the branch coordinated the production of an 18-minute film on basic horse training.

The seventh annual horse improvement program was conducted by the branch to identify superior horses, breeders and trainers in Alberta. Prize moneys of $36,330 were distributed to owners of the 366 horses representing 13 breeds. For each horse, owners received a written appraisal from the team of evaluators.

In cooperation with the commodity development branch, the branch administered a market development program. Ten Alberta horse breed organizations received assistance for conducting projects to improve sales of Alberta-bred horses. Besides attracting buyers from out of the province, breed associations encouraged local buyers to purchase horses in the province. Individual projects included participation at trade fairs, national and international advertising campaigns and special events for Alberta-bred horses. In addition, Appaloosa, Arabian and Quarter Horse breeders hosted buyers from Germany and the United States. Average prices at select sales for Quarter Horses, Arabians and thoroughbreds were $3,285, $6,325 and $11,500 respectively.

As a service to the Alberta Equestrian Federation and provincial breed organizations, the branch conducted drug testing at 21 major shows throughout the province to deter competitors from using forbidden medication. One positive test was reported from the 441 horses tested during the past year.

Travel assistance was provided to 33 Alberta horse breeders who qualified for and participated in out-of-province breed-sponsored national or international championship events. The Canadian National Arabian Championships were held in Edmonton and the Canadian National Appaloosa show was held in Lethbridge in the past year. Other championship events included the U.S. Arabian Championships in Albuquerque, N.M., the U.S. World Appaloosa show in Oklahoma City, the Grand National Morgan show in Oklahoma City and the World Quarter Horse show in Oklahoma City. Alberta Quarter Horse breeders won three world championships during 1981.

The branch conducted potential fertility examinations on 30 stallions. Stallions were referred to the branch because of a pending purchase, a fertility problem or for a utilization recommendation. This service is offered in cooperation with Olds College and Alberta veterinarians.

During 1981-82, the branch continued research on feeding foals for meat as well as sport and recreational

purposes. The branch supported horse health, reproduction and nutritional research being conducted at the University of Alberta and the Western College of Veterinary Medicine. A survey of members of major provincial breed associations provided information on the horse breeding industry in the province. Although only 5 per cent of Alberta horse owners make their living from horse breeding, 30 per cent of them indicated breeding was their main interest in horse ownership.

Pork Industry Branch

The 1981 farm cash receipts from sale of hogs in Alberta were estimated as $195 million, up $28 million from a year earlier. Total production of pigs for slaughter declined by 4 per cent from 1980, and prices rose to $67.81 in Edmonton from $57.22 in 1980. As a percentage of total farm cash receipts, income from hogs fell from 5.5 per cent in 1980 to 5.0 per cent in 1981 in Alberta. Exports of pork for Canada rose by 6 per cent and imports rose by 9 per cent compared with 1980. For Canada, 298 million pounds of pork were exported and 41 million pounds were imported, for a net outflow of 257 million pounds in 1981, about 15 per cent of Canada's total production, compared to 13 per cent in 1980.

The number of active hog producers in Alberta in 1981 was 8,200. The number of hogs marketed in 1981 was 1,601,314. On 1 January 1981 the Alberta breeding herd was reported to be 125,500 and on 1 January 1982 it was reported to be 123,700. Total pigs on farms 1 January 1982 was reported as 1,255,000, 2 per cent below the year previous.

Alberta's share of Canada's hog production was 12.2 per cent in 1981 as compared to 12.4 per cent in 1980.

The low prices experienced in 1980 continued. Because of the consequent loss of cash flow, the emergency stop loss program for hogs was extended a further three months, and paid out an additional $5 million from 1 April 1981 to the first week in June 1981, at which time the market price rose to exceed the guaranteed price of feed costs plus $35 per hog. This program helped prevent a further decline in hog production, and helped maintain a base to build on for the future.

Because of continued low prices and returns, the pork producers market insurance program was instituted. It was funded by a $10 million start-up grant, and operated by the Alberta Pork Producers Marketing Board. Participation was voluntary for existing producers; 70% of Alberta's hog producers signed up, including about 30-33 per cent of registered producers. As of March 31, about $11.5 million was paid out in insurance payments, $3.5 million was taken in as premiums, and $1 million was earned in interest. The pork industry branch head was a member of the steering committee for this program.

Eight swine AI short courses were held in the swine artificial insemination program. One each of these were given in Saskatchewan and British Columbia. A number of individual requests were made for training in the use of AI.

BOAR INVENTORY: SWINE ARTIFICIAL INSEMINATION PROGRAM

Breed	On Hand 31 March 1981	On Hand 31 March 1982	Sold	Added
Yorkshire	8	8	2	2
Landrace	4	4	2	2
Lacombe	2	2	1	1
Duroc	3	4	1	2
Hampshire	3	2	2	1
TOTAL	20	20	8	8

Four of the above sires added were purchased for the swine breeding centre by Agriculture Canada under its sire loan policy.

Semen shipments have more than doubled from last year as shown in the following table.

SEMEN SHIPMENTS BY BREED

	1 April 1980 31 March 1981	1 April 1981 31 March 1982
Yorkshire	532	1012
Landrace	344	982
Duroc	79	448
Hampshire	30	180
Lacombe	95	142
TOTAL	1080	2764

Semen was shipped to various provinces as shown below:

Alberta customers	1797
B.C. customers	647
Manitoba customers	176
Saskatchewan customers	145
Newfoundland customers	16
Demonstrations, etc.	33
	2764

Farrowing rate and litter size were monitored quarterly. Farrowing rate on over 900 sows inseminated for which reports were received was 71 per cent of sows inseminated with an average of 9.75 live piglets born per litter. Inaccurate heat detection and improper timing of the insemination were still the major reasons for conception failure when artificial insemination was used. The program's goal of making superior sires available to a large number of Alberta breeders was being achieved as the program gained acceptance. There were many regular customers of swine AI.

During 1981 a field trial was conducted in the Red Deer area to test the fertility of frozen semen prepared from three sires. One hundred and thirty sows in seven herds were inseminated. Average farrowing rate was 30 per cent and average litter size was 7.6 piglets per litter born. Considerable variation between boars and between farms was observed.

The swine ROP program involved 90 producers of whom 47 tested purebred pigs only, 19 tested both purebred and crossbred pigs, and 24 tested crossbred pigs exclusively. About two-thirds of the producers tested pigs for the purpose of selling breeding stock, and the remaining one-third tested for within herd selection of replacement gilts.

A total of 13,979 pigs was tested on farms, an increase of 108 from last year, and 54 more than two years ago. The producer testing the largest number of pigs tested 855 pigs, the second largest 769 pigs, and third 751 pigs.

In the station test, 758 boars were tested, a decrease of 144 from 1980-81. Performance in the station test and on farm home test is summarized in the accompanying tables.

In the monthly test station sales, 231 boars were sold for $117,365, an average of $508.07. This was an increase of $70.57 per head, and a decrease of four boars sold. The highest priced boar sold was a Lacombe for $3,800.

The program enabled breeders to continue to identify leaner, faster growing boars and gilts for breeding purposes. Demand at test station sales was manifested by higher prices paid in spite of low profits in the industry generally. Foreign demand for Alberta stock was strong because of the existence of this program which gave reliable information on the breeding stock available. The Alberta Swine Breeders Association achieved sales of 245 breeding swine to Mexico for a total of $107,000.

The following tables summarize the results of this program for 1981-82.

ALBERTA SWINE ROP TESTING SUMMARY
1977-1981

	1977	1978	1979	1980	1981
Boars Station Tested					
Number	670	740	838	902	732
Av. Backfat thickness (mm)	18.1	18.0	17.1	17.4	16.6
Av. age to 90 kg (days)	—	—	147	152	149
Av. daily gain (kg)	0.89	0.89	0.91	0.88	0.91
Av. feed conversion	2.57	2.55	2.49	2.55	2.47
Boars Home Tested					
Number	1965	2676	3937	4207	4201
Av. backfat thickness (mm)	15.8	15.4	15.0	14.6	14.4
Av. age to 90 kg (days)	163	167	172	171	166
TOTAL BOARS TESTED	2635	3416	4775	5109	4933
Gilts Home Tested					
Number	4390	7765	9988	9664	9778
Av. backfat thickness (mm)	17.4	16.8	16.0	15.7	15.8
Av. age to 90 kg (days)	172	177	177	174	174
Commercial Pigs	1425	25	193	—	—
TOTAL NO. OF PIGS TESTED	8450	11206	14956	14773	14711

1981-82 SUMMARY BY BREED AND STATION

LEDUC TEST STATION

	York	Land	Lac	Hamp	Duroc	Cross	Total
Number entered	272	26	38	8	20	24	388
Number tested	259	26	37	5	17	22	366
Av. B.F. adj. to 90 kg	16.7	17.1	18.1	13.1	17.3	17.0	16.9
ADG adj to 90 kg	0.89	0.86	0.88	0.81	0.91	0.92	0.89
Feed conversion (kg feed/kg gain)	2.44	2.54	2.55	2.55	2.53	2.37	2.46
Av. age (days)	150	149	151	167	161	147	150
Number died	3	—	1	1	—	1	6
Not offered for sale	135	17	24	4	10	9	199
Number unsold	74	5	5	—	4	9	97
Number sold	54	4	8	1	6	4	77
Total price ($)	24,805	3,375	3,470	350	2,285	1,150	35,435
Av. price ($)	459.35	843.75	433.75	350	380.83	287.50	460.19

LACOMBE TEST STATION

	York	Land	Lac	Hamp	Duroc	Cross	Total
Number entered	266	30	38	14	22	—	370
Number tested	262	30	38	14	22	—	366
Av. B.F. adj to 90 kg	16.4	16.6	17.7	13.4	15.9	—	16.4
ADG adj to 90 kg	0.93	0.91	0.95	0.87	0.89	—	0.92
Feed conversion (kg feed/kg gain)	2.46	2.58	2.51	2.47	2.48	—	2.47
Av. age (days)	147.5	141.4	145.6	156.1	156.4	—	147.7
Number died	4	—	—	—	—	—	4
Not offered for sale (culled etc)	128	14	20	4	11	—	177
Number unsold	30	3	2	—	2	—	37
Number sold	106	13	16	10	9	—	154
Total price ($)	54,600	5,715	13,175	4,850	3,590	—	81,930
Average price ($)	515.09	439.62	823.44	485.00	398.89	—	532.01

HOME TESTED BOARS — BY BREED

Breed	1981 No. Tested	1981 Av. B.F. (mm)	1981 Adj Age (Days)	1980 No. Tested	1980 Av. B.F. (mm)	1980 Adj Age (Days)
Yorkshire	2529	14.5	166	2520	14.6	170
Landrace	488	14.8	164	429	15.5	176
Lacombe	454	15.1	161	511	15.9	163
Hampshire	164	12.4	177	158	12.6	182
Duroc	220	14.1	162	322	15.0	169
Spot				15	14.4	164
Crossbred	346	13.6	167	252	14.5	174
TOTAL	4201	14.4	166	4207	14.6	171

HOME TESTED GILTS — BY BREED

Breed	1981 No. Tested	1981 Av. B.F. (mm)	1981 Adj Age (Days)	1980 No. Tested	1980 Av. B.F. (mm)	1980 Adj Age (Days)
Yorkshire	4075	15.5	172	3943	15.8	175
Landrace	649	16.7	169	606	16.7	176
Lacombe	701	16.4	172	769	17.5	167
Hampshire	155	12.9	182	174	13.3	181
Duroc	163	15.6	164	314	16.1	169
Spot				21	15.0	166
Crossbred	4035	15.9	177	3837	15.6	184
TOTAL	9778	15.8	174	3837	15.7	174

The swine specialists carried out a major share of the swine extension program. Over 267 farm calls were recorded by specialists. These involved questions in nutrition, engineering, herd health, finance, breeding, servicing AI — ROP programs, investigations for ADC, feed test results follow-up, ventilation problems, planning visits and work with local vets, feed company personnel, swine buildings engineers, regional economists, local DAs, and others. Groups of producers were frequently brought together for joint consultation. Specialists conducted over 255 office interviews. Swine extension materials were supplied directly by the specialists and through district offices.

The *Pork Industry Handbook* was launched with 15 initial fact sheets. These were distributed on request to a list of over 700 names. A research review column and a column with questions on nutrition were produced by the specialists and the monogastric nutritionist, and appeared in every edition of the quarterly *Alberta Hog Journal*.

The pork industry branch staff helped organize over 25 local extension meetings throughout the province. In addition, they were actively involved in the planning and staging of the Alberta Pork Seminar (120 attending), the Alberta Pork Congress (about 500 attending), the district agriculturist in-service training course, and meetings of the Alberta Swine Breeders Association, the Western Hog Growers Association, the Southern Alberta Hog Producers Association and the Alberta Pork Producers Marketing Board district meetings.

Staff members participated in meetings and activities of the following advisory committees: Swine ROP advisory committee, Swine ROP advisory board (Canada), Swine AI advisory committee, Alberta swine research advisory committee, Alberta Pork Producers Marketing Board research advisory committee, swine herd health advisory committee, Alberta pork congress board, animal industry advisory committee, and others.

Other activities included working with regional extension staff, testing green certificate trainees in swine production, attending industry swine meetings, making a pork industry display, participating in a new swine record keeping system, working with Alberta Veterinary Medical Association re swine production information, the University of Alberta re Feeders' Day, and a variety of similar activities.

Poultry Branch

Chicken and turkey growers had a relatively profitable year in 1981 as a result of a late year drop in feed grain prices. In particular, turkey growers were able to reduce supplies during the year and reestablish normal profit margins after having a year of surplus supplies. In contrast to chicken and turkey growers, egg producers experienced widely fluctuating egg prices during the year and by year end were receiving prices that were at the same level as the previous January. Profit margins were also severely reduced as provincial feed costs were higher than those in eastern Canada.

On 1 January 1982 turkey storage stocks were well below year earlier levels while chicken stocks had grown substantially to about 40 million pounds as a result of a drop in consumption during the fourth quarter of the year.

Commercial egg marketings through registered egg stations were 2.230 million boxes in 1981 compared to 2.153 million boxes in 1980, an increase of 3.6%. The per capita consumption of shell eggs in Alberta in 1981 was 21.8 dozen, 6.0% lower than the 23.2 dozen in 1980. The rapid increase in Alberta's population resulted in an increase in the movement of shell eggs into Alberta. Net egg movements into the province averaged 10,690 boxes per week compared to 10,218 boxes in 1980, an increase of 4.6%.

Alberta chicken marketings in 1981 increased significantly from 67.570 million lb in 1980 to 74.744 million lb in 1981, an increase of 10.6%. Chicken meat consumption was 7.8% higher in 1981 reaching 74.7 million pounds. Alberta retained its position as the largest marketer of Cornish hens in Canada with a market share of 49.4% in 1981 compared to 45% in 1980. For Canada, slightly higher pork prices and increased demand from the fast food sector resulted in an increase in poultry consumption of 0.7%. Per capita consumption remained about equal to the 36 pounds consumed in 1980. Alberta remained outside the Canadian Marketing Agency for another year but was assigned provincial quota.

Turkey production in 1981 was 16.9 million pounds which was also 102.6% of our quota allotment, while marketings through registered stations totalled about 18.1 million pounds in 1981. This difference was supplied in the live state mostly from the province of Saskatchewan. The per capita disappearance of turkey in Canada in 1981 was 9.0 lb, down from 9.4 lb in 1980. This consumption breakdown was 6.25 lb of heavy turkey (over 10 lb) and 2.77 lb of broiler turkey (under 10 lb).

The branch administration developed and administered regulations, policies, and programs relative to the industry under The Livestock and Livestock Products Act.

Emphasis continued to be placed on programs to increase poultry production, improve production efficiency and thus, farm income. All sectors of poultry production in Alberta were under the supply management system with egg and turkey producers being members of the respective national organizations. The Alberta broiler growers were not members of the Canadian Chicken Marketing Agency and consequently have not been locked into a fixed percentage of the national production volume. In short the Alberta chicken industry was able to increase its production to meet the expanding market.

With the supply management system in place the egg industry used a cost of production formula plus a reasonable return for its producers, while the meat sector set producer prices to cover cost of production. The final price, however, took into account the competitive aspects of poultry meat in relationship to other meat protein.

Programs in the poultry branch were directed to reducing production costs, improving income for the producer and keeping poultry products competitive.

Research was undertaken on nutrition, management and other areas according to requirements or needs of poultry producers and the poultry industry.

Research conducted at the provincial poultry plant during the period 1981-82 included experiments with broiler breeders, leghorn layers, regular broilers and roaster birds.

The use of canola meal in rations for poultry was carried out with meals utilizing specific varieties of canola. In an earlier study it was found that the meals available under field conditions were a blend of the different varieties. Consequently, experiments with broiler breeders and leghorn layers were started in 1981.

The test with breeders involved the use of four levels (0,5,10 and 15%) of commercially obtained canola meal in the rations. The traits measured consisted of egg production, egg size, feed conversion, fertility, hatchability, chick size, and mortality.

The experiment with leghorn layers involved the use of two strains of birds, Shaver and Hyline, two levels of canola meal (0 and 10%) and two levels of energy (2565 and 2500 kilocalories of metabolizable energy per kilogram of ration). In this experiment the following factors were being measured: egg production, egg size, egg grading, interior egg quality, eggshell quality, feed conversion and mortality.

A study on water quality was initiated to examine the effect on poultry production of variations in mineral

Hatchery Egg Supply Flock Approval

Chicken:	No. of Flocks		Average Flock Size		No. of Birds	
Year	Egg	Broiler	Egg	Broiler	Egg	Broiler
1979	37	102	1404	3121	51,946	318,385
1980	22	89	1752	3778	38,655	336,211
1981	30	88	1643	3926	49,278	345,520
Turkeys:						
Year	Lights	Heavy	Lights	Heavy	Lights	Heavy
1979	2	7	5,050	3,250	10,100	22,750
1980	2	7	4,040	4,380	8,080	30,660
1981	1	6	3,650	3,743	3,650	22,460

content, particularly sodium. An experiment with Shaver layers was conducted to assess the importance of sodium and phosphorus as well. In this experiment the effect of using two levels of sodium (0.18 and 0.45%) and two levels of phosphorus (0.38 and 0.48%) was investigated relative to egg production, egg size, egg grading, interior quality of the eggs, eggshell quality, feed conversion and mortality.

The use of canola seed as an alternative source of energy to animal fat was studied. Producers using their own mix mills have difficulty achieving a homogenous distribution of animal fat in the ration, especially in winter. For this reason, four experiments were carried out to study the performance of broiler chicks fed rations containing different levels of rolled canola seed containing 40-42% fat. These studies included the use of mash and crumbled rations. The results obtained showed that as much as 10% rolled canola seed can be included in crumbled or mash rations for broilers without affecting the performance of the birds, although the use of mash rations with or without the addition of 10% canola gave a slower rate of growth.

To prevent and control poultry diseases and to safeguard public health, the poultry branch and the animal health division continued to monitor all breeder flocks and hatcheries with emphasis on salmonella detection and reduction. This program was designed to increase agricultural production by reducing the numbers and kinds of disease-producing organisms in poultry, with emphasis on salmonella, because of its public health significance.

The poultry health program consisted of the hatchery sanitation program (fluff sampling) in which fluff samples were analyzed from the Lethbridge area, the Calgary area, and the Edmonton area. Salmonella isolation in the chicken fluff was 1.47% in 1981 compared to 1.17% in 1980, while in turkeys it was nil for both years.

In February 1981 the poultry health committee decided to discontinue monitoring brooding samples. Instead increased emphasis was placed on clean-out and disinfection with hatching egg shippers.

Under the turkey health program, salmonella was isolated in litter and nest samples during January. In February two flocks totalling 4116 females were marketed owing to the lack of demand for heavy-type turkey hatching eggs. One flock of 55 heavy type females was marketed owing to a virus infection which caused heavy mortality, decreased egg production in hens, and decrease in quantity and quality of semen in toms. Another flock of heavies was marketed in April owing to a fowl cholera outbreak.

Ten permits from British Columbia were received during the past year for a total of 63,300 single comb white leghorn chicks from the animal health division. This compared with 49 permits for 300,500 in 1980, and 51 permits for 236,250 in 1979.

Infectious laryngotracheitis (ILT) outbreaks occurred in two major commercial egg laying flocks in the Linden and Mossleigh districts. ILT was also diagnosed by the Edmonton laboratory in a commercial broiler flock in the Swalwell district.

Other ILT outbreaks occurred in fancy flocks which sometimes involved a small number of commercial leghorns.

There continued to be an increase in demand for factual cost data from the poultry production sector by prospective purchasers, prospective lenders, consumers, commercial producers, hobbyists, regulatory bodies and other governmental agencies. With the

present high capitalization requirements, interest has become an increasingly important part of the cost of production. Updating cost data continued to be a priority.

In the area of poultry extension the branch continued to provide extension services to a wide clientele. Farm calls were made to the most sophisticated commercial poultry producers as well as to the hobbyist.

Many calls and requests were received from small farmers and acreage owners. During 1981-82 our staff made 1032 calls to farm premises and another 205 calls were made to various trade operations. These figures do not include telephone and office calls.

The 31st Alberta Poultry Industry Conference was held in Edmonton in February 1982. The sixth Poultry Servicemen's Workshop was held at Banff Centre in October. In addition to attending the above, staff attended many other meetings and workshops and in some cases helped with the planning and organization of these sessions.

The 67th Annual Calgary Poultry Association Show was held in Calgary in December and the North Central Alberta Show in Wetaskiwin in November. The poultry branch also participated in the Lloydminster poultry show for the first time.

The branch increased its activity in the area of rabbit extension by responding to numerous telephone inquiries and mailing 102 packages of information material.

Regulatory Services and Feeder Association Branch

The main role of the regulatory services and feeder associations branch was the administration of certain acts and their regulations. The acts and regulations were designed to protect livestock producers by providing the following:

- brand registration
- brand inspection service
- licensing and bonding of livestock dealers and agents
- licensing of stockyards and stockyard operators
- protection of lands and agricultural products from livestock running at large
- investigations of fraudulent trade practices concerning livestock
- a means whereby members of feeder associations may acquire livestock for feeding or finishing.

The feeder association section administered The Feeder Associations Guarantee Act which enabled members of feeder associations to acquire livestock for feeding or finishing.

Thirty-seven feeder associations operated under The Feeder Associations Guarantee Act.

During the fiscal year $28,157,530 worth of credit was used to purchase 63,153 cattle and 3,441 sheep by 1,200 feeder members. The amount outstanding as of 31 August 1981 was $14,862,502.

Under The Stray Animals Act, 1,008 head of livestock were impounded during the year. Eight hundred and ten head were returned to the rightful owners after they paid the costs of capture, transportation and maintenance. The remaining 198 head were sold by public auction.

Forty-eight livestock markets and 71 livestock assembly stations were in operation at year end.

There were 781 livestock dealers and agents compared with 996 in 1980. No claims were received against livestock dealers' bonds during 1981.

The number of head of cattle and horses inspected through markets and for export was 2,881,956, a decrease of 93,133 head from 1980.

Four branding demonstrations were conducted.

SUMMARY OF FEEDER ASSOCIATION OPERATIONS 1976 – 1981

Feeding Season	No. of Assn.	No. of Active Members	Cattle	Sheep	Amount of Credit
1976-77	43	1,206	70,147	2,410	13,263,073
1977-78	37	1,092	74,366	2,746	19,578,287
1978-79	37	1,165	73,063	4,090	35,020,548
1979-80	37	1,201	56,312	2,923	27,315,695
1980-81	37	1,200	63,151	3,441	28,157,530

RECORDING OF BRANDS SUMMARY

	Cattle	Horses	Sheep	Total
New brands issued	1,465	569	0	2,034
Transfers	630	70	0	700
Certified extracts	0	1	0	1
Cancelled brands	249	24	1	274
Brands renewed	9,782	1,191	3	10,976
Brands reissued	131	16	0	147
Brands in good standing at 31 December 1981	44,634	6,379	16	51,029

DAIRY DIVISION

The dairy division assisted dairy producers and processors through inspection, consultation and demonstration with the objective of producing legal, safe and wholesome dairy products in an economic manner. The division also encouraged diversification of production to new dairy products.

Producer management programs, e.g., the dairy herd improvement program, assisted producers in developing and maintaining economic production units.

Dairy Processing Branch

Dairy specialists inspected each plant regularly, collected samples for laboratory analysis, submitting the results to headquarters and respective plants, as well as the provincial Board of Health and appropriate area health units.

Unsatisfactory reports were followed up by special inspections and detailed discussions with plant personnel.

As in recent years almost 100 per cent of freshly processed milk from plants complied with Board of Health standards of < 5 coli and < 20,000 S.P.C. These standards were surpassed by approximately 60.11 per cent of samples which showed 0 coli and < 300 S.P.C. in products collected at the processing plants. Increased emphasis has been placed on shelf-life and keeping quality. Fluid and cultured products were tested microbiologically following seven days' storage under controlled conditions designed to simulate conditions until use (one week after "pull date").

ALBERTA DAIRY PLANT RATINGS COMPARED WITH THE NATIONAL RATINGS

	1979	1980	1981
National average plant score (%)	78.8	80.6	81.1
Alberta average plant score (%)	84.3	85.1	85.6
Lowest scoring plant in Alberta (%)	66.6	72.9	70.3
Highest scoring plant in Alberta (%)	98.4	96.0	99.4

The certification of all dairy plant workers in Alberta continued. Specialty certificates in specific areas such as buttermaker, cheesemaker, etc., were issued to seven candidates.

Raw milk supplies to dairy plants were examined for sediment and off-flavors (rancidity), and specific types of organisms relating to the storage and shelf-life expectations of industry and consumers.

Sampling and testing of bulk milk in Alberta continued to be of major concern with special attention paid to preventing milk containing antibiotics or inhibitors from entering the system.

Bulk milk grader training and surveillance were both increased.

Dairy manufacturing plant licences issued in 1981 totalled 48, compared with 37 in 1980.

The trend in the industry towards converting the smaller fluid milk plants to depots and building or expanding larger fluid milk plants was almost completed. Attention shifted to refurbishing industrial milk processing capability.

A modern process cheese factory was under construction. Two new plants were licensed or rebuilt in 1981, and one plant closed.

Dairy Farm Inspection Branch

One hundred and sixty-one dairy enterprises were added to the fluid milk market under the graduated entry program in 1981-82. Not all qualifying producers were accepted by the Dairy Control Board. Even so, this was the largest number of producers granted fluid quota under the graduated entry program in any single year since the program began in 1975.

Over the past four years a concerted effort was made to encourage upgrading and expansion of milk producers to meet production and quality expectations.

Of the 924 dairymen who obtained fluid milk quota under the graduated entry program since 1975, over 600 have entered since 1978.

As of 31 March 1982 there were 1774 milk producers, up from 1734 one year ago. The increase has been in the number of fluid milk producers,which now number 1433, while the number of industrial milk producers has remained constant at 341.

Inspection and advisory services were provided to all milk producers regarding milk quality improvement, and maintenance or upgrading of milk production facilities, including milking equipment.

Specialized advisory services were provided to dairymen concerning proper installation, maintenance and use of milking equipment. Two technicians have developed expertise in this field. They provided support services and information to dairy division staff throughout the province. Communication with dairy equipment installation and service company personnel

was a major part of the responsibility of the specialist technicians.

The dairy farm inspection branch continued to provide advisory and inspection services to milk producers relating to the dairy development loan program administered by the Alberta Agricultural Development Corporation.

On 1 January 1982 a milk grade and price program was introduced. Dairymen who did not meet quality expectations received a lower grade and a reduced price for milk produced in the month in which a violation of the regulation occurred. Subsequent violations in a 365 day period result in further downgrading and greater financial loss to the producer.

Funds generated by the milk grade and price program were submitted to the Dairy Control Board by the processors. These funds were used to pay the innocent producers when a load of milk was rejected by a milk processor. The producer who caused the loss of a load of milk was not paid for his part of the load and was subjected to a low grade and reduced payment for milk sold in the month in which the violation occurred.

Dairy Cattle Improvement Branch

The dairy cattle improvement branch administered the DHI program which serviced 721 (679*) producers. 67 (44*) of them on the supervised DHI program. Approximately 55,000 cows were enrolled on DHI in 1981, an increase of 12 per cent. In addition there were 8,400 cows tested on the federal ROP program in Alberta. Sixty-three per cent of the commercial dairy cattle population in Alberta were enrolled on a milk recording program during 1981-82. Tested herds produced more than two-thirds of the fluid milk produced.

Average milk production increased to a record high of 6,085 kg (13,415 lb) in DHI herds. This was approximately 2,000 kg (4,400 lb) more than the average of all milk cows in the province. Average milk production in the supervised DHI herds increased dramatically to a record 6,795 kg (14,980 lb) per cow year.

The national identification program (NIP) of upgrading, a genetic recovery program for grade cattle, continued as a priority field service. Nearly 100,000 heifer calves have now been identified on this program. Several thousand have been upgraded to meet their breed association's herd book entry requirements, thus increasing substantially the commercial value of the Alberta dairy herd.

* indicates statistics for the previous year, 1980-81

An Alberta milk recording committee was established to carry out the objectives of the 2nd Canadian Conference on Milk Recording which was held in November 1980.

The Alberta milk recording committee endorsed the goal of dairy farmers of Canada to have 80 per cent of the dairy herd enrolled on a milk recording program by 1990 and further, that 30 per cent of these cows be enrolled on an official testing program.

Staffing problems continued to restrict the growth and development of both the owner-sampler and supervised milk recording programs in 1981. The demand for service remained strong throughout the year.

The Alberta milk recording committee, in developing a plan of action which would permit milk recording to expand and to respond more quickly to the needs of the producers, put forward a proposal for the privatization of the DHI field services. The committee continued to work with government.

Herd owners enrolled in DHI were assessed an annual fee for service in 1981-82 depending on the program in which they participated. The Alberta milk recording committee raised the fees 1 January 1982 for the owner-sampler program to $3 per cow tested from $2, and to $9 from $6 for each cow tested on the supervised program.

Branch staff continued to provide herd owners with breeding, feeding and production management information upon which to make effective management decisions related to increasing efficiency of milk production in Alberta. Major projects included workshops on DHI records, "Production Plus" clubs, reproductive efficiency and herd health activities.

The provincial cheese specialist extended the use of newly developed starter culture technology throughout the province, resulting in greater reliability, consistency and quality in cheese making, as well as substantial economic gains to manufacturers.

Administration and Statistics Branch

The branch continued to work closely with the Dairy Control Board in policy formulation. Staff continued to work with producers with respect to dairy board extension material.

The statistics section of the division collected and recorded statistics on Alberta manufactured products for Alberta Statistics and Statistics Canada.

ALBERTA DAIRY CONTROL BOARD

The dairy board, operating under The Dairy Board Act, met its responsibilities in the administration of fluid, industrial milk and cream sectors. These responsibilities included the licensing of dairy producers, processors, and distributors of fluid products; setting and adjusting fluid and industrial milk quotas; regulating time and payment to producers; and in general governing the sale of milk in Alberta.

The board was responsible for the operation of the Alberta milk market sharing plan, an industrial milk plan entered into by federal and provincial authorities. The board is a member of the Canadian milk supply management committee, responsible for the development of the national dairy policy.

The number of active dairy producers – fluid, industrial milk and cream – as of 31 March 1982 totalled 3,988 compared to 4,201 a year ago, while total provincial dairy production was up by 7.30 per cent from the previous year. The largest increase came from fluid milk producers. Approximately half of the increase was utilized to satisfy increased demand for fluid milk sales which were up by 3.81 per cent from the year before.

The board operated a fluid milk equalization pool for Alberta fluid milk producers. This plan successfully completed its seventh year of operation and enabled producers to share in the sales of fluid milk regardless of location or source of sales.

The graduated entry plan operated successfully and during the fiscal year a total of 143 industrial producers entered the fluid sector resulting in a total of 899 graduated entrants since the start of this program in 1975.

Producers' financial returns for fluid milk advanced $0.98 per hL 1 July 1981 and $0.98 per hL of 1 March 1982, ending the fiscal year at $44.21 per hL. Industrial milk advanced $0.91 per hL 1 April 1981, $1.45 per hL 1 August 1981, and $1.55 per hL 1 January 1982. Churning cream prices were also increased April, August and January for total increases of 50 cents per kilogram.

Board staff maintained an audit program of all fluid processors together with inspections to maintain and ensure compliance with regulations issued under the authority of The Alberta Dairy Board Act.

PLANT INDUSTRY DIVISION

The plant industry division provided assistance to producers in plant sciences and related disciplines in order to increase the economic returns to Alberta's agricultural industry and to improve the quality of life in rural and urban settings. In keeping with these aims, the division continued to offer services in the areas of extension, research and development, and problem diagnosis.

Field Crops Branch

Because of depressed farm receipts, branch resources were heavily used at producer meetings. Field tours and extension literature prepared by the branch were in demand. The demand for improved productivity from forages continued, and the impact of the forage associations which the branch has been supporting financially became more obvious as field scale projects got underway.

The Alberta Forage Manual went to reprint in 1981-82.

The interests of domestic and foreign markets in Alberta forage seed remained high. The branch continued to finance the forage varietal testing program at Beaverlodge and the resulting information was given wide distribution by Agriculture Canada and Alberta Agriculture.

The feed freight assistance program continued to highlight concerns related to lack of adequate forage supplies in specific areas.

There were eight forage associations operating, the most recent addition being the North Peace.

Regions 1 and 2 had 750 producers registered in the forage home study course.

A total of 32 meetings was held on special crops. Thirteen contractors for special crops were operating in Alberta.

The Alberta Wheat Pool expanded the Bow Island bean processing plant to contract up to 12,000 acres of beans.

The leafcutter bee program, initiated three years ago to improve Alberta's and Canada's alfalfa seed supply, has put Alberta in an export position and made certified seed readily available.

The dryland corn project demonstrated that 75 bushels per acre was attainable on dryland with current varieties. Research will, it is hoped, develop more suitable varieties that will support yields of 105 bushels per acre.

The Range Management Society of North America held its annual convention in Calgary for the first time. Over 800 scientists and agrologists participated.

The research section of the branch received a recommendation to license three barley varieites: TR 604, Abee, a two-row feed type; BT 507, Empress, a six-row feed type; and BT 506, a six-row malting type. The latter will be held till car lot malting trials are conducted in 1983 with the brewing industry. BT 506 will out-yield Bonanza by 7%-10% and should be a productive variety for Alberta producers. These three varieties have been developed over a 10-year period of research.

A research review of winter wheat, and winter and spring triticales as well as fibre flax and other specialty crops was continued. An administrative change to the feed grain breeding program was prepared.

Alberta Agriculture's Lacombe research farm underwent land levelling, road building, drainage and fencing. The second phase of farm building was underway. Staff consist of three scientists, one technician and 14 staff in temporary term positions.

The high moisture barley project was completed.

The branch administered the municipal co-op seed cleaning plant program. Changes to older plants were widespread in 1981-82. The branch issued 27 upgrading grants totalling $186,952. Seventy-six plants were operating in Alberta. A new plant costing $460,000 was built at La Crete. The plant at St. Paul burned on 1 September 1981 and was being reconstructed at a cost of $1,034,000.

The municipal plants have completed a record volume of cleaning:

1979 – 22,300,000 bushels
1980 – 26,700,000 bushels
1981 – 28,800,000 bushels

An engineering contract was awarded to design a new seed cleaning plant capable of modular development. Fewer plants will operate in the future since construction and operational costs could not be supported if all the present plants had to be replaced.

An intensive survey was conducted by 18 agriculture fieldmen of the seed quality coming out of municipal plants. This involved 29 plants and 324 samples. The results showed that producers were getting a high quality seed cleaning job.

The total output of these plants represented about 75 per cent of the cereal seed required in Alberta.

A new seed cleaning plant program was developed and submitted for management and ministerial review.

The branch was a member of the SeCan Association which had 1,450 members and controlled 70 varieties, mostly allocated by Agriculture Canada. The two barley varieties from the branch's research program were assigned to SeCan for market development.

During 1981, SeCan varieties accounted for over one-third of the pedigreed inspected acres in Canada.

Of the 5,400 members of the Canadian Seed Growers' Association, 1,096 were from Alberta. Seventy-nine thousand hectares of pedigreed seed were inspected in Alberta in 1981. The Canadian total was 400,000 hectares.

Substantial improvements were made in the composition of forage seed mixtures used and the quality of seed purchased by government agencies. The branch assisted in this effort at the request of the purchasing branch.

Reducing summerfallow, reducing salinity, generating better soil fertility and increasing nitrogen content of soils have been major concerns of the branch, through the Forage Seed Council and staff extension programs. The "Plowdown" campaign using Alberta grown legume seed appeared very promising. Continuous cropping, alternative crops, improved cultural practices, and new varieties, coupled with better agronomic practices and extension were the main approaches used to improve the welfare of Alberta's producers.

Alberta Tree Nursery & Horticulture Centre

During April and May 1981, approximately 2.3 million shelterbelt trees and shrubs were distributed, including Arbor Day trees. Approximately 7,200 tree

orders were shipped while 1,300 orders could not be filled in part or in total.

The production aim for shelterbelt planting stock was revised upwards to 3.7 million. It was expected that this volume of planting stock would become available in 1983. Additional land immediately west of the present nursery site will be brought into production to accommodate the additional 1,000,000 seedlings.

During the winter of 1982 a three man crew carried out shelterbelt renovations in the MD of Sturgeon. Approximately 25 farmstead shelterbelts were pruned or thinned out. Six short courses were conducted dealing with shelterbelt establishment and farmstead beautification.

The Alberta Tree Nursery employed an undergraduate horticulturist during the summer months to investigate problems with tree roots in urban settings.

Preparation of deciduous plants required the following amounts of seed by plant type.

PLANT TYPE	AMOUNT OF SEED USED
Tall deciduous species	63 kg
Small deciduous species	18 kg
Hedge plant species	146 kg
Conservation bundle species	6 kg
Coniferous species	2 kg
Miscellaneous species	7 kg

Container production for 1981 totalled 1,368,223 cavities grown within two crop periods.

Production Summary:

Deciduous material = 240,853 cavities
Coniferous material = 1,127,370 cavities

Under the container program a total of 246,283 seedlings was shipped in 1981 to the following clients:

Material	DECIDUOUS MATERIAL	CONIFEROUS
Contract growers	—	130,600
Indian Affairs	—	48,800
Land reclamation	1,816	410
Special orders	11,485	—
Arbor Day	—	34,000
Miscellaneous	1,805	17,367
TOTALS	15,106	231,177

A total of 5,833 native trees was shipped to the various provincial parks in 1981. The native trees were shipped in 1, 2 and 4 gallon pots; bushel baskets; and balled and burlap.

PARK	POTTED DECIDUOUS	POTTED CONIFEROUS
Hillard's Bay	600	803
Tillebrook	200	—
Taber	145	—
Carseland	300	—
Sylvan Lake	800	100
Crimson Lake	—	200
Vermilion	100	320
Kananaskis	100	325
Cold Lake	400	790
Queen Elizabeth	700	—
TOTAL	3345	2538

Deciduous Species – dogwood, mixed willow and plains cottonwood poplar
Coniferous Species – Siberian larch, white spruce, lodgepole pine, jack pine and Scots pine.

Seed investigation staff dealt with three programs: seed investigations, seed orchards, and seed laboratory. The seed section was particularly active in seed production research. The following studies were conducted:

- Seed stratification experiment
- Experimental seeding project
- Seed testing project
- Propagation of subtropical trees and shrubs
- Overwinter storage of bur oak seed
- The effect of rodent repellent on stratified deciduous seed.

In 1981 the fruits of over 30 species of deciduous and coniferous trees and shrubs were harvested in order to obtain an adequate supply of high quality seed needed to satisfy the increased field and container seeding program at the Alberta Tree Nursery and Horticulture Centre.

Collected Species	Date of Harvest	Amount of Fruit Cones Picked (kg)	Yield of Clean Seed (kg)
Tall deciduous	20.08-10.11.81	544	420.11
Small deciduous	31.07-22.08.81	228	27.40
Hedge plants	20.07-20.10.81	822	71.24
Coniferous trees	25.09-17.11.81	1835	9.80
TOTALS		3429	528.44

The saskatoon plantation was maintained to provide production stock, to provide a demonstration area for prospective growers, to study production procedures, and to maintain mother stock of available production types.

The seed production orchards consisted of over 500 coniferous and deciduous trees and shrubs from several different countries. The oneacre fruit orchard was maintained as part of an Alberta Horticulture Centre trial.

An information service for market gardeners and commercial vegetable growers was continued. Vegetable trials were carried out at the Alberta Tree Nursery and Horticulture Centre, the Peace River Correctional Institute and in cooperation with Olds, Lakeland and Fairview Colleges and the University of Alberta.

To assist commercial nurseries, the Alberta Tree Nursery & Horticulture Centre conducted the following studies:

- Container stock media trial
- Rooting and dormancy breaking in saskatoon softwood cuttings
- Rooting of saskatoon root cuttings
- The effects of peat moss in nursery stock packaging
- Propagation of saskatoons with hardwood cuttings
- Chemical weed control in transplanted spruce and pine.

The horticulture extension office served as the department's primary contact with amateur horticulturists throughout the province. Services were expanded in 1981 with the addition of a sod and home garden specialist.

The horticulture extension staff acted as a liaison between Alberta Agriculture and agencies involved with the development of amateur horticulture such as the Alberta Horticultural Association, the University of Alberta Devonian Botanic Garden, urban municipalities (parks and recreation departments) and the universities and colleges.

This office provided horticultural information to rural and urban Albertans by various means. The extension horticulturist planned, coordinated and taught regional courses offered through the offices of the district agriculturists and district home economists.

Displays were assembled at Edmonton Klondike Days, Landscape Alberta Nursery Trades Association annual convention and field days at Alberta Horticultural Research Center and the Alberta Tree Nursery and Horticulture Centre. A 13-minute film on landscaping, "Design for Living", was produced. Slide tape kits on various horticulture topics were provided to amateur gardeners. In 1981, four new kits were added. Publication of the newsletter, *Nursery Notes*, commenced.

Grants were provided to cities in Alberta to assist them in providing a telephone horticultural information service. Grants were also given to the Alberta Horticultural Association and the University of Alberta Devonian Botanic Gardens.

In recognition of the International Year of the Disabled, a two-day workshop on horticulture as therapy was conducted in conjunction with the Alberta Horticultural Association.

Alberta Horticultural Research Center

In 1981 an arboretum was established at Brooks to provide a permanent display of hardy ornamental trees and shrubs for both homeowners and the commercial nursery trade. The planting will be completed within two to three years.

An ongoing program with hardy tree and bush fruit was carried on because of the high public interest in fruit production in the home garden. A long-term program got underway to establish the feasibility of commercial production of some fruit for processing.

The market garden beginning-grower incentive grant was provided to 43 growers. Market garden acreage continued to rise, partly in response to the departmental program of encouraging beginners.

Greenhouse operators have been placed under pressure by rising fuel prices and the high cost of financing. Production areas expanded by only 7 per cent in spite of the desirability of replacing vegetable imports in a time of insecure supply and high costs. Greenhouse "open house" sessions were held quarterly to demonstrate recent developments.

A greenhouse energy use and conservation program provided useful information to producers on ways of saving fuel. Alternative heating systems using waste heat from industrial sources were being tested for possible future use.

A gradual change in cropping patterns occurred in the warmest, driest part of the province. A wide range o' nontraditional crops found a place in the agricultural

production system, e.g. types of pulse crops such as dry edible beans and fababeans. Acreage of grain corn increased. Soybeans, sunflowers and a number of other crops increased in importance. Crops produced as annual forages won greater acceptance.

The potato program continued as the single largest research and extension effort of the centre. In Alberta about 7000 hectares of potatoes were produced for fresh use or for processing into French fries, potato chips or dehydrated granules. A considerable expansion potential was identified for export of high quality seed potatoes; Alberta Horticultural Research Center staff worked with other agencies to improve the quality and supply of seed potatoes particularly for export to the U.S. northwest.

The regional crops laboratory provided a diagnostic and advisory back-up service to the district agriculturists and other professionals, as well as to growers directly. Over 1500 cases were completed in 1981-82. Several plant disease projects funded by Farming for the Future were conducted.

In 1981 Alberta Horticulture Research Center suffered substantial losses owing to herbicide contamination of the water supplied to the centre for irrigation. This underlined the danger associated with chemicals used in modern agriculture. Research in herbicidal control of weeds provided new and useful information for the wide range of crop species grown as horticulture and special crops.

Because of the high costs of importing honeybees and the danger of importing serious pests, greater stress has been placed on overwintering bees and the subsequent spring management of colonies to improve spring population buildup.

Three monthly newsletters were published entirely by Alberta Horticulture Research Center staff: a crop protection letter on pest problems and their control, a market garden letter for new and established fruit and vegetable growers, and a greenhouse letter for the greenhouse industry. An apiculture newsletter was published jointly with the provincial apiarist. Staff contributed regularly to the vegetable and potato newsletters which were published by grower associations.

Approximately 50 per cent of all staff time was used in extension activities. All staff made visits to farms, conducted information meetings and short courses, and published results in various forms.

An ongoing and necessary function was the testing and demonstration of new crop cultivars. Trials were conducted at Brooks, Bow Island, Strathmore, Edmonton, Peace River and other locations across the province. Vegetable trials were conducted in cooperation with colleges and the University of Alberta.

Soils Branch

The continuing objective of the branch was to provide Alberta's farming public with information and laboratory services designed to increase agricultural production and improve farm income.

Soils extension and education were the main programs within the branch. Fact sheets, press releases, information kits and films were prepared and radio and television appearances, short courses and field days were conducted on a wide range of subjects, including agrometeorology, fertilizer use and application, acid soils, soil testing and sampling, plant nutrient requirements, cropping practices, summerfallow, solonetzic soils improvement, dryland salinity control, lime and marl use, and use of soil amendments. Interbranch and interdepartmental liaison regarding agricultural land use, capability ratings and issues affecting farmers' use of land were important branch activities.

Applied research projects on soil fertility, designed to increase the efficiency of fertilizers and other soil amendments, were established on farmers' fields. The results were used to improve general fertilizer recommendations and increase farm income. Most projects were cooperative and involved other research institutions in Alberta.

Dryland salinity applied research was conducted on a number of farm sites using cropping and drainage as preventative measures.

Soil improvement applied research involved the assessment of crop response to deep plowing, ripping and liming of solonetzic soils using field and laboratory techniques.

In agrometeorology, an applied research project was carried out to assess the importance of certain bacteria in causing frost injury to Alberta crops. Barley and wheat crops tested were found to harbor large populations of ice-nucleating bacteria, which increased the susceptibility of plants to frost damage at a critical stage. These results indicated a potential for crop protection through bacteria management.

Through the soil conservation area program (SCAP), grants of up to $30,000 per municipality per year were paid to agricultural service boards for prevention of erosion damage caused by wind or water and undertaking remedial measures. Branch staff assisted agricultural fieldmen with inspection of projects involving grassing waterways, diverting water to reduce erosion, and filling gullies. Dryland salinity control was also demonstrated under this program. Forty-nine municipalities took advantage of the SCAP program, receiving grants totalling $355,000.

In June 1981, the Minister announced the agricultural lime freight assistance (ALFA) program providing grants to farmers covering 80 per cent of the freight costs after the first $5.50 per tonne of transporting lime from the quarry to the farm. The announcement of the program provided incentive for the development of a supply of agricultural lime and marl. One source of agricultural lime at Exshaw and a number of marl deposits in west-central Alberta were developed by late fall. Sixty-two applications were received representing more than 5,000 tonnes of lime or marl and $151,000 was paid in grants. Three firms developed transportation, application and soil sampling services located at Grande Prairie, Ponoka and Westlock.

A farmers' association in the County of Warner was formed to work with Alberta Agriculture to control dryland salinity. The association provided liaison with various government departments, local government and the farming community in developing control programs including field investigations to identify control measures such as cropping to remove excess moisture and drainage.

The agricultural soil and feed testing laboratory continued to:

- Provide an analytical and advisory service to the general public
- Provide diagnostic and investigational services to the department
- Conduct applied research on major production problems
- Compile and summarize soil and crop analytical data.

Producer use of the testing services increased to 17,990 samples from 15,372 samples in 1980. Lime requirement analysis was conducted for 594 samples. Private soil and feed testing laboratories also experienced an increase in use of their services by farmers, ranchers and greenhouse operators.

Department staff continued to use the diagnostic services of the laboratory by submitting 4,040 samples to assist with production problems. Laboratory and branch staff were involved in many research projects which required a further analysis of 14,942 samples. Research studies included grain and forage quality, plant nutrition, and soil fertility and amendments. Most of the laboratory research was conducted in cooperation with universities, Agriculture Canada and private sector research agencies.

Interest in micronutrients and special analysis of feed materials by producers was high (2,667 analyses) indicating a more complete evaluation of feeds and livestock rations.

LABORATORY SERVICES – SAMPLE VOLUME
Number of Samples for Each Fiscal Year

Type of Sample	Feeds & Plant Materials			
	1978/79	1979/80	1980/81	1981/82
Regular farm	5,172	5,565	3,601	3,224
Diagnostic	1,322	1,062	2,974	2,139
Research	2,223	2,548	1,596	4,337
* Special fees	351	173	75	—
Total	9,068	9,348	8,246	9,700

Type of Sample	Farm Soil			
	1978/79	1979/80	1980/81	1981/82
Regular farm	14,526	14,422	10,122	13,086
Diagnostic	1,361	1,257	1,920	1,700
Research	5,361	7,739	6,589	10,605
* Special fees	1,176	1,359	443	—
Total	22,424	24,777	19,074	25,391

Type of Sample	Greenhouse and Garden Soils			
	1978/79	1979/80	1980/81	1981/82
Regular	1,455	1,539	1,649	1,480
Diagnostic	122	271	178	201
Total	1,577	1,864	1,827	1,681

* This category was eliminated July 1, 1980 with new fee structure.

Crop Protection and Pest Control Branch

The branch continued to provide assistance to producers in protecting crops and livestock from insect, animal, and plant disease pests. Major activities consisted of surveys of pests and damage; laboratory and field research relating to control measures; providing forecasts and updated information on pest control; and assistance through specialist staff, training and materials to municipalities, farmers and the public.

The Agricultural Pests Act 1974 with 10 regulations provided the basis for policies to manage six declared pests: the Norway rat, warble fly, grasshopper, bacterial ring rot, fireblight and Dutch elm disease; and three nuisances: the magpie, skunk and coyote. The legislation was administered on a provincial basis with training provided to municipal officers responsible for local pest control.

Animal pest control was regionalized with the appointment of regional supervisors at Lethbridge, Vermilion and Edmonton. Programs were continued for the control of Norway rats, field rodents, rabies vectors, coyote predation on livestock and damage by other vertebrate pests. Alberta completed 31 years of basic rat freedom. Eight municipal pest control officers removed rats and skunks along 600 km of the eastern buffer zone. There were 94 rat infestations located in the buffer zone compared to 83 infestations in 1980. Almost all infestations were eliminated over winter. Public support was excellent in both reporting suspected rats and in cooperating in control measures.

The skunk rabies outbreak in southern Alberta decreased with 23 rabid skunks diagnosed in 1981 compared to 53 in 1980. Special crews were used to eliminate skunks wherever rabies was found. Diagnostic services were provided by the Animal Disease Research Institute of Agriculture Canada. Elimination of skunks continued in the 30 km wide buffer zone along the eastern border. No rabid skunks have been found in the buffer zone for over four years.

Coyote damage control, which was conducted through agricultural service boards, made use of all available techniques. Municipal fieldmen were trained and certified to assist producers in coyote damage control. The annual animal pests seminar was used to train 64 department and municipal staff. Six regional predator specialists trained and assisted municipal fieldmen and producers in controlling predator problems and in confirming claims for predator damage compensation. Damage compensation for coyotes was $114,466 for 296 approved claims.

The problem wildlife committee coordinated animal pest control programs. Branch staff supported the fish and wildlife division in control of beaver, bears, wolves and other problem wildlife. The compensation program for bear damage in beeyards covered losses of $9,264 experienced by 13 beekeepers in 1981.

The Athabasca River was treated twice to control black flies. However, a serious outbreak still occurred in the fall causing extensive damage to livestock. The monitoring and control program was continued by a consulting firm, funded through a grant to the County of Athabasca. Monitoring indicated that two treatments did not produce significant residues in fish or have an impact on nontarget organisms. Approximately 30,000 acres of canola in southern Alberta and 900 acres in the Peace region were sprayed to control Bertha armyworm. The provincewide pheromone monitoring system proved useful in southern Alberta but was less effective in the Peace region.

Approximately 12,000 acres of forage crops were sprayed in northeastern Alberta to control severe grasshopper infestations. Beekeepers and local governments shared in the increased cost of insecticides using those which were less hazardous to bees. The department continued to phase out its activity as the main supplier of grasshopper chemicals as reserve stocks were used up and the trade ensured that supplies were available.

Stored grain insects were a major problem throughout Alberta. Forest tent caterpillars continued to defoliate trees throughout west-central Alberta and the Peace region. Approximately 15,000 acres of recreational and residential areas were treated with malathion or Dipel. The European corn borer was found in 21 corn fields in the Medicine Hat area. An extensive survey and control program was mounted to eradicate this potentially serious pest.

The honey crop was one of Alberta's largest at 23.1 million pounds. About 40,000 of the 180,000 hives in the province were overwintered. This shift was stimulated by the increased cost of U.S. packaged bees and the possibility of importing new pests. The testing of ethylene oxide fumigation to control American foulbrood disease was continued but service work to beekeepers was discontinued until national registration requirements are met.

Disease surveys in central and northern Alberta showed extensive canola losses from seedling blight. Many fields were reseeded. Blackleg of canola was not found in Alberta despite the common occurrence of this disease in Saskatchewan. Surveys showed no Dutch elm disease or elm bark beetles although the disease was established in Montana and Manitoba. One case was found in Regina in 1981.

Verticillium wilt of alfalfa was found in 22 irrigated fields in southern Alberta, up from five fields in 1980. An

intensive survey and control program was underway to eradicate the disease, or at least to limit its spread. Field trials on fungicide control of Sclerotinia stem rot showed a yield increase of more than 100 per cent in Argentine canola.

The bacterial ring rot (BRR) control program operated with the cooperation of seven municipalities. Grants were increased to cover the cost of inflation since 1976. BBR was absent in Alberta seed potato stocks but the usual trace amounts were found on commercial farms as in past years. In reviewing the situation, the Alberta Potato Commission requested that the BRR control program be continued for another three years.

The regional crop laboratories at Brooks, Fairview and Olds provided a diagnostic, research, information and extension crop protection service for their respective regions. In addition the Olds laboratory operated the seed potato improvement program. Basic stocks of seed potatoes were indexed for disease and 9,467 disease-free tubers and rooted cuttings were provided to seed potato growers.

The pest management group of the Alberta Environmental Centre (AEC) at Vegreville provided laboratory and applied research services for Alberta Agriculture and the farming community. AEC served as the main facility for regional laboratories, provided diagnostic services for north-central Alberta, and handled all chemical damage investigations for the province.

Weed Control and Field Services Branch

Emphasis was placed on training both district agriculturists and agricultural fieldmen, as the branch shifted its role from one of reacting to requests for information and resources to one of actively preparing for and promoting decentralization so that requests for information could be handled on a local basis. The development of computer assisted herbicide selection programs complemented the use of upgraded printed material. Extension aids such as slide-sound kits, displays, and handout material were used in weed control extension.

Attention was directed toward the upgrading of enforcement capabilities of agricultural fieldmen and also toward presenting a more balanced and factual viewpoint of the hazards associated with the use of pesticides.

Data on weed distribution throughout the province and other related information were computer stored to assist in making better recommendations in the Weed Alert program.

Concerted efforts to eradicate nodding thistle and diffuse and spotted knapweed were stepped up.

Weather Modification

For the eighth year a government-funded hail suppression cloud seeding program operated within a 130 km circle of Red Deer. The number of hail reports from the project area in 1981 was 30 per cent below the long term average for the area, with no hail being reported during the last 10 days of August.

From June 20 to August 31 only 50 per cent of the average number of hail reports were received from an area bounded by Red Deer-Stettler to Wetaskiwin-Camrose.

Rainfall amounts varied considerably with 300-400 mm being reported in the eastern regions of the project. Less than 200 mm of this fell after May 1.

Aircraft cloud seeding operations for hail suppression were conducted on 43 days; 690 aircraft hours were flown as compared to 1,000 hours in 1980. The number of cloud top and cloud base flares used was reduced by 25 per cent owing to the decreased incidence of hailstorms and the introduction of acetone generators on some of the aircraft.

The ground-based cloud seeding program in southern Alberta operated from June 21 to August 21 with 85 ground generators being situated in an area from Calgary to the U.S. border and east from the foothills to Vauxhall. A total of 3,550 hours of operations was conducted on 45 days during the period.

The advisory committee on weather modification met monthly with representatives of the Alberta Research Council, monitoring programs, recommending change, and developing plans for future operational research.

ALBERTA HAIL AND CROP INSURANCE CORPORATION*

The Alberta Hail and Crop Insurance Corporation continued to offer Alberta's farmers the opportunity of insuring their grain crops against loss resulting from natural hazards. Two programs were offered: (1) "All Risk" Crop Insurance provided protection against major loss resulting from any of the natural perils including drought, frost, excessive moisture, hail, snow, insects and plant disease. The insured farmer received coverage for each crop, based on historic yields for his area or farm, and if production fell below this level, he was paid for the shortage. The program was a federal-provincial cost-sharing plan, with the federal government paying one-half of the total premium cost, and the province paying all administrative expenses as well as subsidizing premiums in the high risk areas. The crop insurance program was intended to provide economic security to the individual farmer and stability to the farming community. (2) Hail Insurance provided protection against loss caused by the single hazard of hail. This long-standing program was entirely self-sustaining and geared to the needs of those farmers who perceive hail as the only hazard likely to cause serious loss to their crops.

Approximately two-thirds of the acreage seeded to grain and oilseeds in Alberta was insured under one or the other of these two programs.

Coverage under the "all-risk" crop insurance program reached a record level in 1981. Acreage insured was also at an all-time high, even though the numbers of policyholders dropped off slightly.

STATISTICAL SUMMARY SHOWING ALL-RISK CROP INSURANCE COVERAGE IN 1980 AND 1981

	1981	1980
Policies	18,695	19,039
Acres insured	7,022,000	6,649,000
Risk	$484,074,000	$381,048,000
Hail endorsement coverage	$400,669,000	$229,674,000
Premiums*	$ 66,360,000	$ 55,757,000
Indemnities		
Basic policy	$ 13,718,000	$ 14,709,000
Hail endorsement	$ 13,275,000	$ 17,327,000
TOTAL	$ 26,993,006	$ 32,036,000

In 1981, losses paid under the basic policy were well below normal, relative to risk carried, as average grain yields in the province were once again above average. Hail losses, too, were considerably below normal in 1981.

No major changes were made in the crop insurance program, though coverage was added for grain corn grown under irrigation in southern Alberta.

The hay and pasture insurance program, introduced in 1979, was expanded again in 1981 to include not only an area extending across central Alberta but a strip running along the western side of the province from Calgary south to the U.S. border. Results of this program in its first three years of operation follow:

HAY AND PASTURE INSURANCE 1979-81*

	1981	1980	1979
Number of policyholders	1,041	964	409
Coverage	$8,411,330	$6,656,920	$2,038,335
Premium	$ 961,009	$ 620,375	$ 215,560
Number paid indemnities	331	613	204
Indemnities paid	$ 452,340	$ 761,655	$ 172,592

* Includes premiums paid by farmers, the provincial high-risk subsidy and the matching contribution paid by the federal government.

This was a drought program with loss payments being made on the basis of calculated production, relative to normal, taking into account available moisture, heat and sunshine. In 1981, payments were made in east-central regions where drought was fairly severe. Other areas did not qualify.

Coverage under the hail program reached an all-time high in 1981, resulting partly from the better-than-average crops which farmers wished to protect and partly from higher farm operating expenses and the need to cover production costs. The incidence of hail was well below normal, resulting in a loss-to-premium ratio of 50.6 per cent compared to the long-term experience of 68.1 per cent.

* The Alberta Hail and Crop Insurance Corporation publishes a statutory Annual Report which provides more detailed information than is given in this section.

HAIL INSURANCE COVERAGE 1980-81

	1981	1980
Policies	10,636	9,193
Acres insured	3,425,000	2,801,000
Risk	$218,549,000	$153,678,000
Premiums	$ 12,760,000	$ 9,190,000
Indemnities	$ 6,453,000	$ 5,825,000
L/P ratio – %	50.6	63.4

In addition to its crop and hail insurance programs, the Alberta Hail and Crop Insurance Corporation administered the wildlife damage compensation program for the public lands division of Alberta Energy and Natural Resources.

ANIMAL HEALTH DIVISION

Division programs assisted agricultural production by providing laboratory and field assistance with disease diagnosis; providing information on prevention, control and treatment of disease; inspecting animals and meat to prevent disease transmission to animals and man; and conducting research into a variety of problems.

A number of disease problems were particularly important and will require continued effort. Poisoning of livestock by chemically treated seed grain caused significant losses in several herds of animals. Sarcoptic mange continued to increase in a number of cattle herds. Canada Agriculture veterinarians used a new injectable drug on a field trial basis which may prove to be very useful in mange control. Leptospirosis continued to increase in incidence in cattle and swine; this disease can be transmitted to humans. Western encephalitis occurred in a number of horses which provided a warning to increase mosquito control to prevent human cases.

Changes were made to the program to help control infectious laryngotracheitis in poultry whereby vaccination and sanitary control would replace slaughter and compensation. Changes were made in the swine herd health program, in order that it have a stronger impact on the quality of seed stock herds, and on the development of herd health programs in commercial swine operations.

In cooperation with the fish and wildlife staff at the Brooks hatchery, a successful control program for tuberculosis and salmonellosis was established.

A number of research projects and investigations were carried out. These included several projects on trace minerals, a cattle feedlot respiratory disease project, a study of new vaccine efficacy for bursal disease in chickens, a continuing study of salmonellosis in poultry, and a survey of bones from bovine fetuses which indicated that poor nutrition of the cow could result in poor bone growth in the fetus. The study on milk progesterone assay for pregnancy determination in cows was concluded and recommendations presented to the dairy producers.

The rabies control program in skunks in southern Alberta continued, resulting in collection of 23 positive skunks. Another outbreak of rabies occurred in the Rosemary area and the control program was instituted.

The federal brucellosis control program continued to be effective in Alberta with very few newly affected herds being discovered.

Meat Hygiene Branch

The branch provided inspection to 60 red meat plants, eight poultry plants, 85 Hutterite colonies processing poultry, and one rabbit plant. Livestock inspected during the year included 44,471 cattle, 60,993 hogs, 6,867 sheep, 254 goats, 24,718 rabbits, 89,493 ducks, geese and turkeys, 1,161,316 broilers and 317,706 fowl. Condemnations for the year were approximately 0.35% for cattle, 1.4% for hogs, and 0.5% for other species. A total of 33,682 portions was condemned.

The growth of the meat packing industry served by the meat inspection program continued with three new plants coming into production.

The livestock disaster and predator indemnity programs continued to be administered by the branch. These programs indemnified livestock producers who suffered through "Act-of-God" incidents over which they had little or no control, producers suffering livestock losses through predation and beekeepers suffering bear damage. Three disaster claims, 14 beeyard damage claims and 503 predator damage claims were paid.

Preventive Medicine Branch

Responsibility for the administration of The Livestock Diseases Act and regulations, and The Fur Farms Act and regulations continued to be carried out by this branch. These programs contributed to prevention and control of disease in livestock and to safeguard human health by control of certain diseases and regulations regarding the sale of livestock medicine. A major objective of the branch was the promotion and encouragement of increased emphasis on herd disease prevention and improved production techniques among livestock producers and veterinarians.

Increasing numbers of practising veterinarians were utilized for auction market inspections, community pasture inspections, swine herd health visits, disease investigations and extension programs. The animal health home study course was successfully introduced in regions 5 and 6. Over 1,000 people registered for the course.

The six ARDA veterinary clinics in western and northern Alberta continued to provide a full range of veterinary service. The clinics at Edson, High Prairie and Fairview remained viable practices, whereas those at Valleyview, Manning and Fort Vermilion required additional income support in order to retain practitioners.

The Alberta certified preconditioned feeder program was expanded considerably. There were 9,200 calves processed with 5,100 sold at seven monitored sales in four locations in Alberta. Producers received average additional prices of $2.34 cwt for preimmunized and $4.04 cwt for preconditioned steer calves. The after-sale feedlot health performance in certified calves, both those remaining in Alberta and those shipped to Ontario, was found to be better than that of a comparison group of calves.

Most extension presentations were to producers, although several were made to students at the University of Alberta, Western College of Veterinary Medicine and Olds College.

Field investigations were carried out in all types of livestock; a variety of different disease conditions was encountered.

Research into management factors affecting respiratory disease in feedlots began and data were collected in order to begin analysis of the study.

Mink production continued in the province with nine licensed mink ranchers. Ten licences were issued for fox farming which revived after a dormant period of 36 years.

The swine herd health program continued at a very high level of interest and not all applications for enrolment could be accepted. To encourage herds that are increasingly free of disease, changes to the program included publishing numerical scores for evaluating snouts and lungs with regard to disease for the seed stock herds. Commercial section herds will be enrolled only for a total period of four years and most inspections will be carried out by private veterinary practitioners. This will allow new herds to be enrolled without expanding the program and will encourage both producers and veterinary practitioners to develop private herd health programs.

Auction market inspection continued at a similar number of sales as in 1980, although the number of animals inspected was down slightly. Livestock assembly stations were also inspected for sanitary conditions. Livestock entering community pastures were inspected at 37 locations. A total of 283 inspections was conducted on 77,699 cattle and 8,066 sheep. A considered effort was made to eliminate sheep footrot from a community pasture.

Pathology Branch

The branch provided disease diagnosis and consultation to veterinary practitioners, livestock producers, other government departments, institutions and others in central Alberta. Veterinary specialists in pathology examined a wide variety of species including domestic, zoo and wild animals, birds and fish. Pneumonia in cattle remained a major problem. Many of the causative bacteria have become more antibiotic resistant, making treatment more difficult. Pneumonias caused by allergic reactions and pneumonias caused by viruses continued to be problems as well.

Leptospirosis occurred in beef cattle, dairy cattle and swine herds. There was a risk of human infection particularly from dairy cows, the most important manifestation of the infection in all species being abortion. A coccidia-like parasite called Sarcocystis caused a problem with muscle wasting and retarded growth in herds. Anthrax was diagnosed from a single animal and no further cases occurred. A viral disease, transmissable gastroenteritis, caused significant losses in baby pigs in several swine herds. Pneumonia continued as a problem in pigs.

Several diseases in sheep appeared to be on the increase, including Johnes disease and *Brucella ovis* infection. Both diseases are difficult to control. A wide variety of other disease conditions were diagnosed in many species of animals.

Regional Laboratories Branch

The branch was responsible for the operation of diagnostic laboratories in Airdrie, Lethbridge and Fairview. As well as diagnostic service, consultation on matters of disease and disease prevention was provided to livestock and poultry producers and their veterinarians. Consignments to the three laboratories reached an all-time high.

Pneumonias, Hemophilus infections, coccidiosis, infectious bovine rhinotracheitis (IBR) and bovine virus diarrhea (BVD) continued to be prominent disease problems in cattle.

Transmissible gastroenteritis caused significant losses in swine herds in southern Alberta.

Pulmonary adenomatosis of sheep was diagnosed for the first time in Alberta. This disease causes a chronic pneumonia for which there is no treatment at present.

Botulism caused significant losses in wild water fowl in southern Alberta.

Effective input into salmonella and tuberculosis control at the Brooks hatchery resulted in apparent eradication of tuberculosis and a much reduced incidence of salmonellosis in birds intended for release throughout the province.

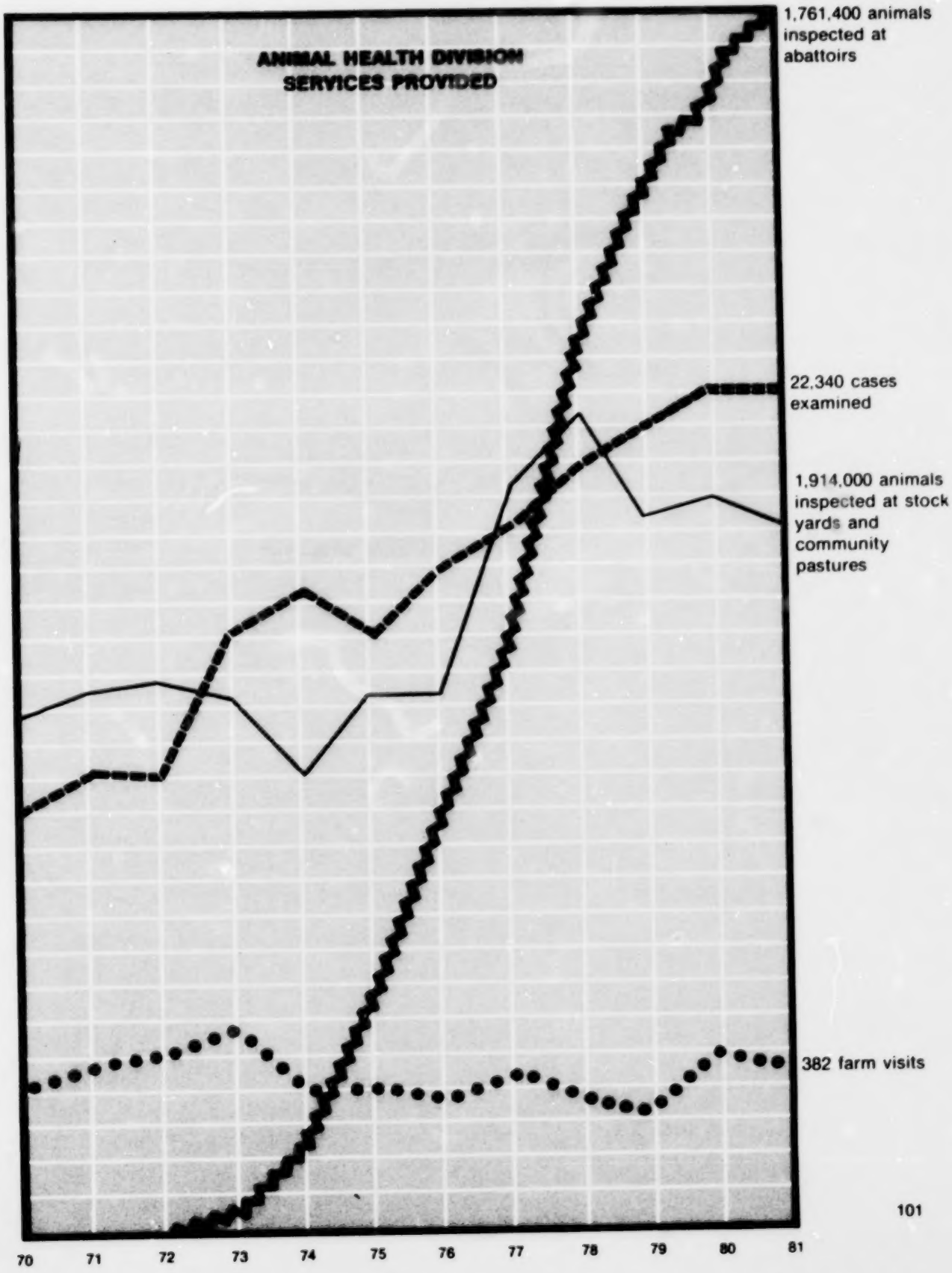
Reference Laboratories Branch

The main functions of the branch were to provide a fast and accurate diagnostic support service to pathology branch veterinarians, as well as to private practitioners and livestock producers and to provide a province wide reference laboratory service, particularly for virology, serology, electron microscopy and toxicology. The number of specimens received by the lab increased compared with 1980-81.

Continued development of faster and more accurate methods for use in the microbiology area resulted in a number of techniques which could give improved service. These developments occurred primarily in the areas of virology and serology.

Continued high productivity of tissues processed for microscopic examination and electron microscopy provided invaluable aids to diagnosis. The number of specimens handled in the histopathology section increased compared with 1980-81.

The toxicology section submissions received also increased over 1980-81, partly as a result of research projects in trace minerals. A similar number of poisoning cases were found as a year earlier. Strychnine and lead poisoning remained prominent in animals. The human toxicology and water quality analysis functions continued at a comparable level to 1980-81.


ANIMAL HEALTH DIVISION
SERVICES PROVIDED
1,761,400 animals inspected at abattoirs
22,340 cases examined
1,914,000 animals inspected at stock yards and community pastures
382 farm visits
70
71
72
73
74
75
76
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APPENDIX

Acts Administered By Alberta Agriculture

Agricultural Development Act
Agricultural Pests Act
Agricultural Relief Advances Act
Agricultural Research Trust Act
Agricultural Service Board Act
Agricultural Societies Act
Agrologists Act
Artificial Insemination of Domestic Animals Act
Bee Act
Beet Lien Act
Brand Act
Crops Liens Priorities Act
Crop Payments Act
Crop Payments (Irrigated Land Sales) Act
Dairy Board Act
Dairy Industry Act
Department of Agriculture Act
Farm Home Improvements Act
Farm Improvement Act
Farm Implement Act
Federal-Provincial Farm Assistance Act
Feeder Associations Guarantee Act
Fur Farms Act
Grain Buyers' Licensing Act
Grain Charges Limitation Act
Hail and Crop Insurance Act
Harvesting Liens Act
Horned Cattle Purchases Act
Irrigation Act
Irrigation Land Manager Act
Line Fence Act
Livery Stable Keepers Act
Livestock and Livestock Products Act
Livestock Brand Inspection Act
Livestock Diseases Act, 1971
Livestock Injury Act
Margarine Act
Marketing Agricultural Products Act
Meat Inspection Act
Names of Homes Act
Seed Control Areas Act
Seed Dealers Act
Seed Grain Purchases Act
Soil Conservation Act
Stray Animals Act
Surface Rights Act
Threshers' Lien Act
Vegetable Sales (Alberta) Act
Veterinary Surgeons Act
Weed Control Act
Wheat Board Money Trust Act

POOR

QUALITY

ORIGINAL